DISTRIBUTION AGE

A Chilton Publication

NOVEMBER, 1953

MATERIALS HANDLING, TRANSPORTATION, WAREHOUSING

In This Issue

HELICOPTER HANDLING

Piasecki Helicopter Corp. has grown into one of the leading rotary wing aircraft manufacturers since World War II. Celebrating its 10th anniversary this year, the young, imaginative company developed its own methods and equipment for handling a new aviation product. An H-21, at right, transports bulky 1-ton load, an "external loading" method used during the Korean war, which foreshadows new modes of handling **. . . See page 18.**

Other Features

New MERCURY INDUSTRIAL TRACTORS

Here it is...the completely new MERCURY "Banty." A small, rugged 4 wheel gasoline tractor with a turning radius of only 62". Features new double reduction drive axle with demountable wheel rim and tire assemblies...self-energizing hydraulic brakes ...new semi-elliptic spring suspension, front and rear...cushion or pneumatic tires...all-new automotive type steering plus many other unusual features.

Model 460

"Banty" *(Gas Powered)*
Available in Two Capacities:
2300 and 3000 lbs. DBP.

Model 550

"Tug" *(Battery Powered)*
Available in Two Capacities:
2000 and 2500 lbs. DBP.

The compact, versatile, new MERCURY "Tug" electric tractor. Features *automotive type steering*...4-speed magnetic contactor control with timed acceleration and controlled plugging...new type double reduction drive with demountable wheel rim and tire assemblies...self-energizing hydraulic brakes and new type semi-elliptic spring suspension. Available in twin-3 wheel, or 4 wheel model with wide front tread.

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FORK TRUCKS · TRACTORS · TRAILERS

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- ☐ Both "Banty" Model 460 and "Tug" Model 550

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FEATURES

DEPARTMENTS

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On the Line — DA — EDITORIAL COMMENT

What's New?

The other day we dropped in to see an old acquaintance.

"What's new, Fred?" we asked by way of greeting.

"Nothing—not a thing," he replied and motioned us to sit.

We soon found that his remark was more than a casual rejoinder. The revelation came after his 'phone rang. Fred let go a blue blast at the caller for a delay in the unloading of some highway trucks.

"That's your problem, not mine!" he shouted after listening a moment. "If I get billed for extra time, you're going to pay for it. What's more, if this happens again I'll find a warehouse that can do a better job."

He slammed the 'phone in its cradle and, in a moment, made another call. This time a motor carrier got the works.

As we sat there waiting, we remembered that our last visit here was under almost identical conditions. Fred was right, we thought, there was nothing new here. The same old troubles.

"We held him up?" His outburst cut into our thoughts. "That driver's crazy!" Then came the same old threats.

The 'phone came down with a bang. We reached for an ash tray to hide our embarrassment.

Nonchalantly, Fred lit a cigarette and turned his attention to us. For the next few minutes we talked about thickheads, tripe and trivia. Then we rose to go. Fred offered to walk us to the door.

The trip was interrupted several times. A chap stopped Fred to say a case slipped off the dock and split wide open, another complained about some bills of lading. A baldheaded gent said a certain truck arrived but they wouldn't be able to load it for an hour, so what should they do?

"Make him wait!" Fred snapped.

We left happy to be rid of this confusion which, unfortunately, is not confined to this plant. In too many cases our plant visits result in the "nothing new" report. Yet, in most there is room for some improvement.

Soon the year will be drawing to an end. No man, at least no executive, should permit a year to close without taking stock of his new accomplishments during the past year.

It may be better dispatching, a new piece of equipment, a new method of handling freight—anything that represents real progress.

New things are not necessarily good things, to be sure. But experimentation with new systems or equipment requires an open mind and willingness to improve and correct. Without such a mental attitude no one can progress or prosper.

How can YOU answer the question, "What's new?"

Yakkety Yak

A genius merely is a guy who does *extra*ordinary things with ordinary things.

. . . A few accessories can change a piece of materials handling equipment from a machine to a system.

. . . SURPLUSES: U. S. dairy locker is bursting its seams; not only with butter, a record of 278 million pounds (as of Oct. 1), but also with 417 million pounds of dried milk and 260 million pounds of cheese—almost one billion pounds!

. . . Almost similar situation exists with other commodities enjoying government price support. At the end of September, 400,000 bales of '53 cotton crop went under support loans. The same period last year there were less than 9,000 bales. At current rate, U. S. holdings could reach 5.5 million bales by the deadline, April 30, 1954.

. . . RUSSKI YAKSKI: Russia's new "defense" budget is reported to be cut 10.2 billion rubles—3.2 per cent. Want to bet her satellites are bled more than that for "protection"?

. . . The Russians "belatedly" announce the "invention" of 3D—standard movies projected on a corrugated aluminum screen. Spectators don't need 3D glasses. They need 3-oz glasses—of vodka—for jumpin' eyeballs!

H. V. Greene — Editor

LETTERS
TO THE EDITOR

The Storage Picture

To The Editor:

In the February issue of DISTRIBUTION AGE your editor suggests the pamphlet "The Storage Picture" should be must reading. We shall appreciate it very much if you will send a copy of this article.

James S. Neefus
Assistant Cashier
National City Bank
New York, N. Y.

Additional copies of The Storage Picture can be obtained by writing the Defense Transport Administration, Washington 25, D. C. Your letter should include the booklet title, and the fact that it was published September 5, 1952.—Ed.

Fork Truck Training

To The Editor:

The article "Fork Truck School Opens in Philadelphia," appearing in the September issue of your magazine, is an excellent example of benefits made possible through the cooperative effort of interested parties.

However, you state that the training program is the "first of its kind." I should like to point out that a training program for fork truck operators has been advocated and practiced by the Navy Department for several years. Such a program has been operated at the Naval Air Material Center, Philadelphia, Pa., since 1943.

A. A. Kravitz
Supply and Fiscal Dept.
Naval Air Material Center
Philadelphia, Pa.

Editorial apologies for an editorial oversight. Of course the Navy has been doing excellent work in this field for some time. In fact, as indicated by the Survey Article on Page 17 in this issue, a number of private firms conduct such programs. In the September article we meant to imply, of course, that the program was the first of its kind under the joint sponsorship of warehouse management, organized labor, and the equipment manufacturer.—Ed.

Flame Retardant

To The Editor:

In a recent issue an article by James Joseph featured a flame retardant. We would greatly appreciate information about this material.

W. H. Allen
Joslyn Mfg. and Supply Co.
Franklin Park, Ill.

Additional details have been forwarded to Mr. Allen. For more information please write direct to SealoXo-Lin, 3227 Verdugo Rd., Los Angeles 65, Cal.—Ed.

Chuting the NEWS

Golden Anniversary of Trucking Celebrated at 20th ATA Convention

More than 2,500 trucking industry leaders and their guests attended the Golden Anniversary of Trucking celebration at the 20th annual convention of the American Trucking Associations, Inc., at the Statler and Biltmore Hotels in Los Angeles, Oct. 26-30.

J. L. McCaffrey, president, International Harvester Co., addressed the first general luncheon meeting on Monday, Oct. 26.

The trucking industry leaders examined problems they believed to be impeding the natural progress of truck transportation. The questions of adequate highways, government and state regulation, taxes, safety and equipment were studied.

Highlight of the convention was the ceremonies at the luncheon on Tues., Oct. 27, incident to the first day of issue of a special commemorative stamp honoring the 50th anniversary of the trucking industry.

Speakers at the ceremonies were the Hon. Arthur E. Summerfield, Postmaster General of the United States, and Dave Beck, general president of the International Brotherhood of Teamsters.

This is the design of the Trucking Industry Stamp, which went on sale Oct. 27 at the ATA convention in Los Angeles, Cal.

NTC Elects Barry

The National Traffic Committee, meeting in Washington, D. C., for the first time since being reconstituted in July, has elected E. J. Barry, Portland, Ore., chairman for the 1953-1954 term.

Other officers chosen were: W. P. Downey, Columbus, Ohio, 1st vice-chairman; B. L. Frazier, Winston-Salem, N. C., 2nd vice-chairman; and F. G. Freund, Washington, D. C., secretary.

Packaging Institute Elects Officers; Highest Attendance at Annual Forum

At the 15th Annual Forum of Packaging Institute, the members elected the following new directors for a 3-year term: R. J. Dahl, vice president, E. R. Squibb & Sons Div., of Mathieson Chemical Co.; A. Douglas Murphy, coordinator of packaging, Esso-Standard Oil Co. The following were re-elected for a second 3-year term: E. H. Balkema, director of purchases, Colgate-Palmolive-Peet Co.; Walter F. Daley, vice president, New Haven Pulp & Board Co.; Roger V. Wilson, manager, Customer Service, Continental Can Co.; Horace T. Baker, Hudson-Sharp Machine Co.; Herbert C. Holbrook, manager, Flex-Vac Division, Standard Packaging Corp.; T. A. Torrence, Aluminum Co. of America.

Officers chosen by the Board of Directors were: president, F. S. Leinbach, secretary, asst. general sales manager, and member of board, Riegel Paper Corp.; vice president, R. Chester Reed, supervisor, Packages and Shipping, The Texas Company. Dr. L. V. Burton was re-appointed executive director. Some 1135 persons attended.

(Please Turn Page)

Coming Events

Nov. 1-7—Packaging Association of Canada, Annual Convention, Toronto, Can.
Nov. 4-6—17th National Time and Motion Study and Management Clinic, Sheraton Hotel, Chicago, Ill.
Nov. 5—Southwest Shippers Motor Carrier Conference, Dallas, Texas.
Nov. 9-12—Refrigeration and Air Conditioning Exposition, Public Auditorium, Cleveland, Ohio.
Nov. 9-12—International Soft Drink Industry Exposition, International Amphitheatre, Chicago, Ill.
Nov. 9-13—Montreal Materials Handling Show, Berri Square, Montreal, Que. (Also Montreal Tool and Industrial Equipment Show.)
Nov. 16—Southwestern Industrial Traffic League, New Orleans, La.
Nov. 16-17—ATA, Customer Relations Council, Baltimore, Md.
Nov. 16-18—40th National Foreign Trade Convention, New York, N. Y.
Nov. 17—Customs Brokers and Forwarders Association, Fraunces Tavern, New York.
Nov. 19-20—National Industrial Traffic League, Annual Meeting, New Orleans, La. (Executive Committee, Nov. 17-18.)
Jan. 25-28—Plant Maintenance Show, International Amphitheatre, Chicago, Ill.
Jan. 28-29—National Council of Private Motor Truck Owners Inc. (15th Annual Meeting), Chicago, Ill.
Feb. 1-5—Frozen Food Packers Convention, Hotel Commodore, New York, N. Y.
Feb. 14-18—National Furniture Warehousemen's Association Annual Convention, New Orleans, La.
Feb. 21-27—National Frozen Food Merchandising Convention and Exposition, 71st Regiment Armory, New York City, N. Y.
May 4-6—5th Highway Transportation Congress, NHUC, Mayflower Hotel, Washington, D. C.

Chuting the News

(Continued from Preceding Page)

Small Shipments Conference Reelects Officers; Protest Unfair Freight Forwarder Practices

The Second Annual Meeting of the National Small Shipments Traffic Conference at the Congress Hotel, Chicago, Ill., Sept. 30-Oct. 2, unanimously reelected its executive officers for a second term: General chairman, George O. Griffith, director of traffic, American Home Products, Inc., New York, N. Y.; secretary, Frank Cohen, traffic manager, Coast-to-Coast Stores, Minneapolis, Minn., and treasurer, Spencer E. Hughes, general traffic manager, McLellan Stores Co., New York, N. Y.

A resolution was adopted by the conference opposing "the freight forwarders' action in establishing and maintaining unjust and unreasonable rate stops or rules and regulations resulting in unreasonable practices." They plan to take concerted action with other groups to maintain reasonable rates and minimum charges for services.

The delegates approved a resolution supporting the Broyhill Bill, HR-2685, which restores the former size and weight limitations of parcel post packages in the first zone of 100 in. overall and not exceeding 70 lbs. Under the present law the size may not exceed 70 in. overall or weigh more than 40 lbs.

The organization's Executive Committee voted to incorporate the NSSTC and appointed a committee to work out the details. Present plans are to establish a central office in Washington, D. C.

John L. Webb, manager of stations and motor service of the Pennsylvania Railroad, addressed the conference luncheon on the unsatisfactory lcl service situation and railroads' progress in solving it.

—DA—

NTLS Reelects Willet

At the 8th annual meeting of the National Truck Leasing System, held at Palmer House, Chicago, Ill., Howard Willett, Jr., was reelected president, R. D. Sidel, vice president, John Black, Jr., treasurer, and J. A. Ryder, secretary.

—DA—

New Thru-Trailer Service

Effective Oct. 5th, a new thru-trailer coast to coast service coordinates the operations of Spector Motor Service and Pacific Intermountain Express. Shipments will be routed on a single bill and will move over tight relay schedules.

Detroit Conference on Economics of Materials Handling: Addressing recent meeting of 200 selected executives from Mid-West were: l. to r., E. C. Stephenson, vice-pres., Finances & Accounts, J. L. Hudson Co., Detroit, Mich.; W. W. Beardslee, mgr., Manufacturing Services Dept., General Electric Co., Schenectady, N. Y.; panel moderator, Thomas H. Nelson, partner, Rogers, Slade & Hill, New York, N. Y.; J. D. Sheahan, partner, Drake, Startzman, Sheahan & Barclay, New York, N. Y., and A. T. Waidelich, vice-pres. & mgr, Research Div, Austin Co., Cleveland, Ohio

Adamski Does It Again

Quite an armful! Alex Adamski of Chicago (right) receives from Goley D. Sontheimer, safety director of the ATA, for the third successive year, the big trophy awarded to the U. S. truck roadeo champion, becoming the permanent titleholder of the award

—DA—

Dan Gusaeff Honored By The ATA: "For Meritorious Service In The Interest Of The Trucking Industry," Gusaeff, center, claim department manager of Branch Motor Express Co. and chairman of Region 2 of the National Freight Claim Committee, is awarded the ATA Special Citation from John Miller, left, executive secretary of the ATA's National Freight Claim Committee; and Norman Rovine, right, Branch sales manager

Truck Transportation Week

The Independent Advisory Committee to the Trucking Industry, Inc., has proclaimed Nov. 16-22 as Truck Transportation Week, commemorating 50 years of trucking. Dave Beck, president of the International Brotherhood of Teamsters (AFL) and chairman of ACT, received a letter of congratulations from President Dwight D. Eisenhower commending the transportation industry on its tremendous achievements.

Other directors of the ACT are: Walter F. Carey, president, American Trucking Associations, Inc.; Roy Fruehauf, president, Fruehauf Trailer Co., and B. M. Seymour, president, Associated Transport, Inc., leading trucking firm.

Representatives of user companies confer with MHI executives after luncheon meeting in Cleveland at Fall membership meeting of MHI. L. to R.—The late W. J. Dernberger (Ford), R. W. Mallick (Westinghouse), C. B. Elledge (General Electric) 1st vice president of MHI, Arthur Fryer, Secretary of AMHS, G. R. Bell (J. L. Hudson), W. E. Schirmer (Clark) 2nd vice president of MHI. Schirmer holds copy of Booklet No. 3 in "Library of Know-How"

J. Wilson Tallman Elected President Southwest Warehouse & Transfermen's Assn.

The 36th Annual Convention of the Southwest Warehouse & Transfermen's Association, Inc., at the Hotel Texas, Fort Worth, Tex., Oct. 14-16, elected the following officers: president, J. Wilson Tallman, Southern Transfer & Storage Co., San Antonio, Tex.; 1st vice president, D. L. Wiggington, O.K. Transfer & Storage Co., Lawton, Okla.; 2nd vice president, Stewart Johnson, Scobey Fireproof Storage Co., San Antonio, Tex.; and treasurer, V. L. Pollard, Texas Fireproof Storage Co., Waco, Tex.

"The Growing Importance of Trucks" was the subject of a talk by James Taylor, Executive Director, TMTA, Austin, Texas, which preceded a film on transportation, "Empire Builders."

Sales and promotion, materials handling, advertising, Texas vehicle regulations and warehouse profits were discussed at panel meetings by the delegates.

—DA—

LCL Research Bureau

Moving to improve the handling of lcl freight, the Association of American Railroads is setting up a new research group to explore all phases of lcl traffic. Chicago will be the center of the research activities of the group, which began operations Oct. 1 as part of the AAR Freight Station Section. G. H. Hill, Chicago, former Superintendent of Stations and Transfers, Western Region of the Pennsylvania Railroad, was named Director.

—DA—

San Francisco Port Director Robert H. Wylie was elected president of the American Association of Port Authorities by the 42nd annual convention in Toronto, Canada.

—DA—

The Merchants Refrigerating Co., New York, N. Y., is negotiating for the purchase of the Modesto Refrigerating Co., Modesto, Cal.

—DA—

Shippers Elect Officers

John W. Lind, general traffic manager, National Supply Co., was elected president of the National Association of Shippers Advisory Boards at the annual meeting.

Named vice presidents of the association were C. L. Denk, Jr., general traffic manager, Fulton Bag & Cotton Mills, and J. W. Witherspoon, assistant general traffic manager, United States Rubber Co. T. Chase Burwell, vice president, A. E. Staley Mfg. Co., Decatur, Ill., was elected secretary.

(*Please Turn to Page* 54)

MEN

IN THE NEWS

Materials Handling

Richard J. Benson — appointed advertising manager, Bassick Co. He formerly handled government sales and supervised company literature.

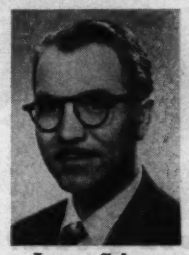
R. D. Mount—promoted to manager, Distributor Sales and Truck Caster Sales for the Bassick Co.; **Edward F. Wheeler** — named manager, General Caster Sales for original equipment and Chair Control Sales.

Roland Whitehurst—appointed general manager Industrial Products Div., The Electric Storage Battery Co., in addition to his regular duties as vice president and director.

Edward B. Dawson—appointed engineering manager for the Elevator Div., Westinghouse Electric Corp. He succeeds **E. M. Bouton**, who retired recently after 26 years service as engineering manager.

E. A. Smith—new vice president and manager of Koehring Company's two export sales subsidiaries, Koehring Inter-American Co. and Koehring Overseas Co.

Clifford H. Shirley—promoted to newly created position of advertising manager, Tire Div., United States Rubber Co.



Robert M. Whitney — appointed manager, National Advertising & Promotion, The Yale & Towne Manufacturing Co. He was formerly with Automatic Transportation Co.

James Schwarz—named sales manager, Leebaw Manufacturing Co.

Martin Larson — named manager, Hyster Co., Seattle Branch. Hyster also named **Fred D. Robinson**, manager of the Spokane Branch.

Frank C. Edwards—appointed general manager of the P&H Diesel Engine Div., Harnischfeger Corp. **J. F. Catalane**—appointed sales manager of the P&H Small Excavator Div.

Packing & Packaging

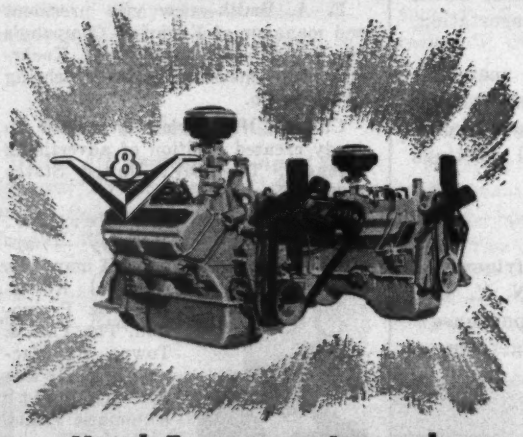
J. B. Trigg—new sales manager of the Chase Bag Co., Buffalo, N. Y., branch. **James F. Porter**—named manager, Toledo, Ohio, branch.

(*Please Turn to Page* 55)

ANNOUNCING NEW DODGE "Job-Rated" TRUCKS

Brilliant new design opens new era in trucking!

Compare their new comfort! Test their new handling ease!
See their new low work-saving design!

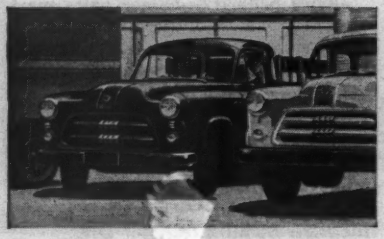


2 GREAT ENGINE LINE-UPS! In addition to cost-cutting 6's, Dodge now offers the most powerful V-8 engines of all leading trucks! Available in 1½-, 2-, and 2½-ton models . . . standard in 2¾-, 3-, 3½-ton! Revolutionary hemispherical combustion chamber for high efficiency! Get free book on engine efficiency and its importance to you at your Dodge dealer's!

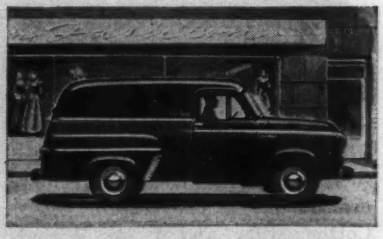
OVER 75 NEW FEATURES! Spectacular low-built lines! New increases in G.C.W.! New cab sealing against dust, drafts! Nonskid running boards!

PLUS famous Dodge features like . . . completely rustproofed sheet metal . . . moistureproof ignition! Truck-o-matic transmission with gyrol Fluid Drive, available!

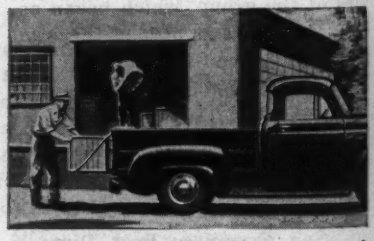
New! Even greater values . . . yet still priced with the lowest!



New! Sharper Turning! New steering system for the shortest turning of all leading trucks! New shorter conventional tractors! New, one-piece windshield! More total vision area than any other popular make!



New! Smarter Styling! New colors! New flow-line design, featuring integral fenders, sparkling chrome! New two-tone interior styling! New wider doors! New easy-chair seats! New instrument panel.



New! Lower Lines! Pick-up and panel floors knee-high for loading ease! Lower running board for easier entry! Lower hood for greater visibility! New, low center of gravity for road-hugging stability!

SEE YOUR FRIENDLY DODGE DEALER!

Circle No. 108 on Card, Page 34, for more information

Washington DA

By Karl Rannells, *Chilton Washington News Bureau*

Industrial Expansion Expansion programs for industrial facilities are not going ahead as fast as the government had expected—or wanted. There are indications that industry has begun a stretchout phase, will take longer to complete expansion operations. Reports to the ODM show only one-half the amount of completions expected for this year.

There's no reason yet for the distribution industries to think plans for increased productive capacity are being discarded. Best evidence is that industry as a whole has already started work on 90 per cent of the $26 billion plus of planned expansion.

Protective Construction About 100 expansion goals have been completed to date and the remaining 133 are being given a second look by ODM. Some may be trimmed a little, a few may be expanded a little. More attention will be given to: Dispersal — building new facilities out of potential target areas; and "protective construction" —adding extra safeguards against bomb damage to buildings which can't be erected out of the target areas.

Such construction is figured to add about 20 per cent to the normal cost of building. Under a new policy, the government will grant rapid tax write-off for 100 per cent of the protective construction cost. Warehouses and terminal facilities can qualify for certificates.

Federal Economy Government economy drive is now being felt all along the line and has reached down into the field of federal warehousing construction. Orders have been passed down by the Budget Bureau that most federal building projects must be reviewed for "essentiality." As a result, public construction dropped by one-third during first-half 1953. Government financed warehouse construction was hit hard. New contracts awarded duping the first six months amounted to $31 million as compared with $200 million during the like period 1952.

Airline Freight Airlines will stress lower inventory and packaging costs in seeking to further boost their rising tonnage of freight cargoes. So far this year, ton-miles of air freight is reported up 18 per cent from last year and a new record of close to 300 million ton-miles is already forecast for 1953. Increasing rates for surface transport, is credited for some of the increased air freight volume. But airlines will play up speed of air delivery, which tends to require smaller inventory levels and to save packaging costs since many items, such as spare parts, can be shipped in original containers.

Quantity Discount A big question now before a Federal District Court is whether a ruling by the Federal Trade Commission concerning discounts for quantity purchases of tires is valid. As it stands, the ruling forbids granting additional discounts for more than carload lots of tires and tubes—in effect, freezing discount rates at the carload level. Belief is that if the ruling is upheld, way would be paved for the federal government to set a ceiling for all products at which discount rates must be halted.

Minimum Wage Law Talk is that Congress is to be asked to increase the minimum wage rate from 75c to $1.25 per hour. Strategy is to ask for much more than can be expected and to settle for what can be obtained. Several bills providing for varying increases in the minimum wage standard are pending but none have been endorsed as yet by the White House. It is a good guess that recommendation by President Eisenhower would persuade Congress to set a new minimum hourly figure of close to $1.

Defense Pipeline The government is trying to drum up support for new pipeline capacity to bring 940,000 barrels of oil a day from Texas and the Midwest to the East Coast. Biggest resistance is from within the oil industry but the Petroleum Administration for Defense hopes to sell the idea on the basis of national security. Recent PAD surveys indicate that existing tanker-pipeline capacity would be inadequate for full mobilization.

Highway Transport Freight tonnage hauled over the highways between cities is showing a healthy pulse rate. Reports for second quarter 1953 show that pay loads on inter-city runs were 13.5 per cent heavier than last year. Haulaways for motor vehicles showed highest individual gain, amounting to more than 30 per cent. Highway tonnage increased almost everywhere except on the West Coast where a slight drop was reported.

Locker Plants Advances in production, processing, and storage in the frozen food business have not been matched by improvements in the distribution system, an Agriculture Department survey indicates. At the same time, indication was that locker plants are growing in importance as distribution channels. Of the plants surveyed, about two-thirds are now selling frozen foods along with storage space—about 72 per cent of such sales being made at retail.

(*Please Turn to Page* 68)

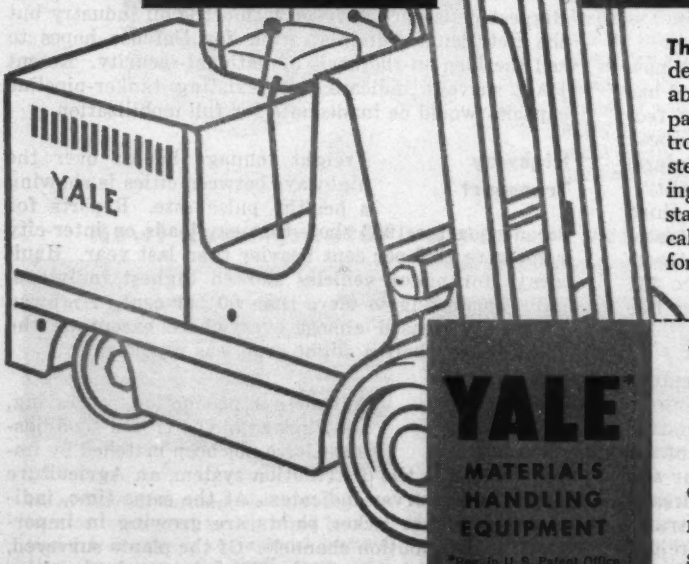
Lower production costs with YALE ELECTRIC TRUCKS

...and the YALE attachments designed for your industry

Crate clamp attachment also available with sideshifter.

Pusher attachment for automatic positioning of loads.

Paper roll clamp attachment rotates through a full 360°.



The rugged structure of every YALE Electric Truck is designed to house the most efficient power plant available... to insure more than ample capacity for your particular lifting, moving and stacking jobs. The trouble-free YALE hydraulic system provides sure, steady power for safer, smoother lifting and lowering. Yet, with all these advantages... with power and stamina to spare... YALE Electric Trucks are economical to own, operate and maintain... amazingly versatile for every materials handling problem.

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FEATURE ARTICLE

Accident Prevention Neglected By Industry

Survey shows only 30 per cent of participating industries conduct accident prevention programs for industrial truck operators—40 per cent plan to establish such programs

THERE'S much to be done to reduce industrial truck accidents—if the data obtained from the latest DA Industry Survey can be considered a sampling of the practices in the operation of such vehicles.

In the first place, only 30 per cent of the respondents have an accident prevention program.

In the second place, only 50 per cent maintain records of industrial truck accidents.

Survey Indications

These figures would seem to indicate:

1. The number of industrial truck accidents is not great enough to cause concern.
2. The nature of accidents occurring is in the minor category.
3. Due to pressure of other problems, management has not yet organized records or an accident prevention program for its intra-plant transportation system.

Actually, the first two presumptions are in error. Management should not wait until accidents pile up before taking corrective action. Even one accident could result in a human fatality.

This seems to be understood by management. Of the respondents not maintaining accident records at this survey, 40 per cent expressed intention or definite plans to do so in the near or immediate future.

Further discussion of industrial truck accidents naturally must be confined to the respondents having accident data on file. Of this group (50 per cent of all respondents) 90 per cent seem to have only basic facts, and only 10 per cent have detailed information.

Chargeable vs. Non-chargeable

The first point of information sought was the extent to which accidents were directly traceable to the industrial truck operators. Data supplied by the respondents show as few as 30 per cent are attributed to operators and as many as 80 per cent.

Naturally, the complementary percentages—70 and 20—apply to accidents not charged to the drivers. Specific examples obtained from the survey show that poor condition of floors and platforms are the leading causes of such accidents. Careless pedestrians and poor vehicle maintenance are the next two principal reasons, in that order.

As for the chargeable accidents, the following 10 received the most mentions: Speeding, overloading, careless stacking, unbalanced loads, inexperienced operators, cowboy driving, hitting overhead obstructions, equipment neglect, carelessness on docks and ramps, and aisle or intersection violations.

Principal Causes

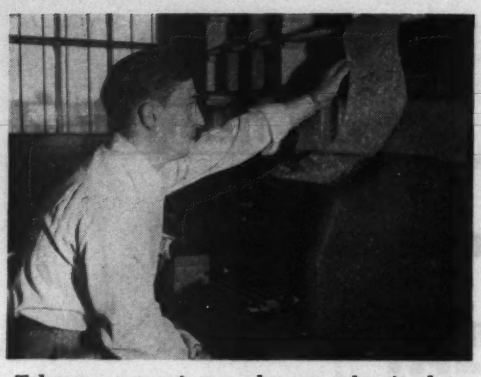
The five principal causes—based on the order of frequency reported by the respondents—are as follows:

1. Aisle and intersection violations.
2. Speeding.
3. Carelessness on docks and ramps tied for third place with hitting overhead obstructions.
4. Equipment neglect.
5. Unbalanced loads.

It should be mentioned that, in arranging these causes in reported order of frequency, there were several questions as to definitions of terms. For example, was "cowboy driving" (which rated sixth place) a matter of excessive speed and carelessness or was greater recklessness implied?

Also, the position was taken that the first three of the five principal causes constituted cowboy driving.

Despite definition difficulties it is evident that industrial truck drivers should develop a stop-go habit at all aisle intersections, reduce normal speed of operation and exercise greater care in the operation of their vehicles and in the handling of their loads. •



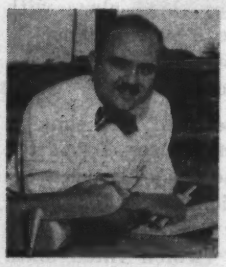
Teletypes connecting warehouses and main plant speed delivery of orders, and cut phone bills

Special trailer transports fuselage from subcontractor to take its place in production line of new Piasecki military helicopter model

Five-ton overhead monorail crane raises fuselage from trailer, guided to the production line by the supervisor of the Inner-Traffic Dept.

From outdoor storage transmission, in reusable container, arrives at plant for assembly line

Helicopter Handling Goes



Frank N. Piasecki

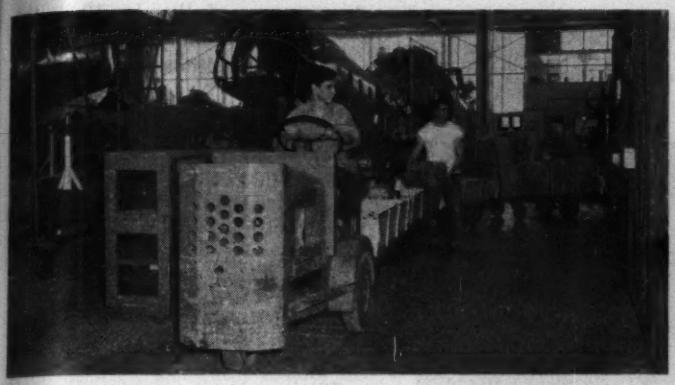
Chairman, Board of Directors, Piasecki Helicopter Corp.

Piasecki Helicopter Corp. also keeps its wheels on the ground by using specially designed equipment to handle the 14,000 production parts needed for helicopters

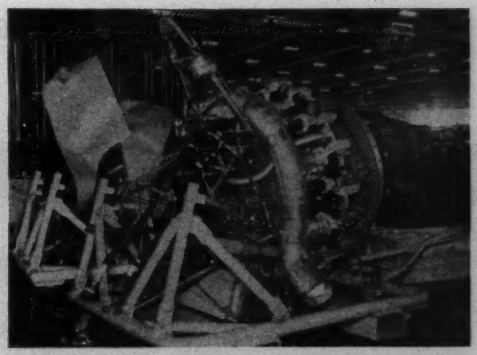
DESIGNING helicopters, building them, buying and making thousands of parts as well as controlling their plant-wide distribution was a major handling problem for the Piasecki Helicopter Corp., Morton, Pa.

The complexity of the problem made it impossible to use a standard handling system. Piasecki's Master Planning department devised its own system with standard and specially designed equipment. Although it is not a mass production setup, the production and assembly lines operate at maximum efficiency.

Last year Piasecki sold more than $64 million worth of helicopters. This month a 40-passenger tandem-rotor helicopter rolled off the production lines at the Morton plant, marking the 10th anniversary of the firm.



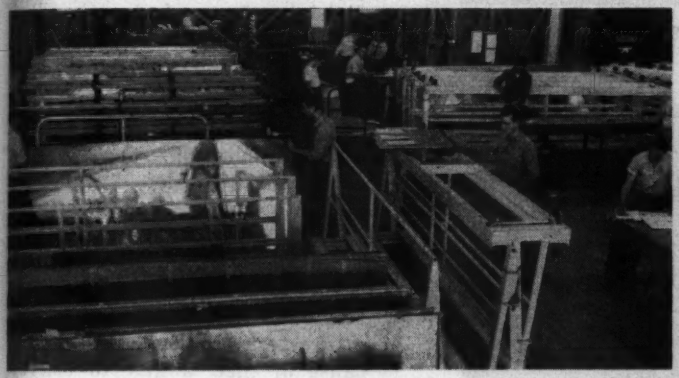
The "Pony Express," a tractor pulling four heavy-duty trailers follows scheduled route. Guards prevent falling of small parts



Specially designed dolly secures heavy engine, which may be wheeled or conveyed by fork truck

Handling the numerous helicopter parts through the air saves labor, helps to speed assembly

Scratch-free aluminum requires delicate handling. Two men lift inter-leaved sheets onto castered A-frame which goes to assembly



Up In The Air

This greater sales volume and the increased passenger and cargo capacities of its helicopters are two guides controlling expansion of plant facilities and keeping Piasecki's Master Planning department alerted to its helicopter handling needs.

The company originated in August, 1940, when a group of young engineers, headed by Frank N. Piasecki, met for discussions and experiments in rotary wing design. In 1943, they incorporated as P-V Engineering Forum and Piasecki flew their first aircraft, a single-rotor, one-passenger model.

The following year P-V Engineering Forum received a contract from the U. S. Navy for design and construction of an experimental tandem transport and 13 months later, in March, 1944, the aircraft was

(*Please Turn Page*)

Helicopter Handling . . . .

(Continued from Preceding Page)

Fuselages are supported by special framed dolly secured on an in-floor conveyor track. Small assembly parts are centrally located at upper left

Recently designed reusable metal containers, hold three rotor blades, are lightweight, corrosion resistant, great space saver in warehouse

Old box wasted time and space. Blades were carried to the fifth floor, removed from wooden boxes, placed on A-frames, the empty boxes stored

flown successfully. In 1946, the company was refinanced, expanded and renamed Piasecki Helicopter Corp.

The young company did not have the machine tools and equipment to manufacture all the parts for helicopters. Other manufacturers with adequate plant facilities were called in to supply the 14,000 parts and 11,000 different kinds of materials according to Piasecki designs and production methods.

Fitting these numerous suppliers into the production picture was the job of the Master Planning department which outlined the engineering, tool and production schedules. The subsequent divisions of manufacture handled their individual production details according to the overall plan.

Limited Production Volume

This production schedule does not permit utilization of every new type of handling equipment because this is not a mass production setup. Standard equipment, such as fork trucks, pallets, and tractor trailers, were found to be of greatest assistance, mainly because of their ability to convey varied sized parts to all divisions of the plant.

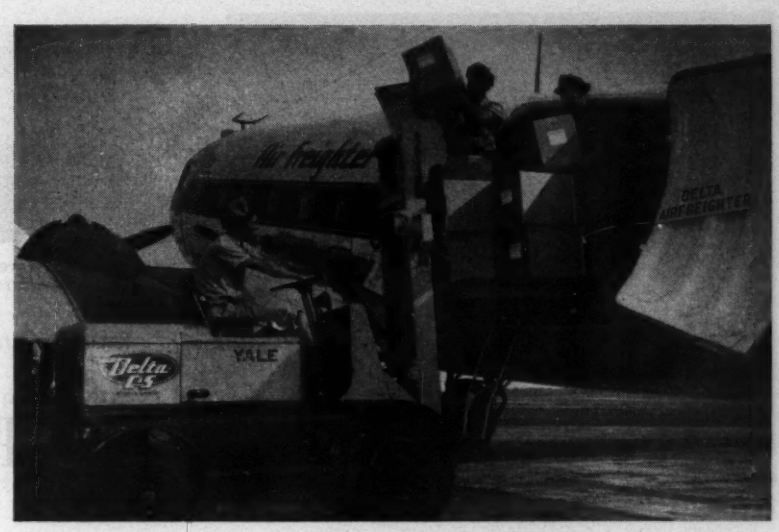
(*Please Turn to Page* 58)

Box was bulky, heavy, deteriorated outdoors, new container is weatherproof

Airlines Promote Loss and Damage Claims Prevention

Proper packaging and handling procedures spark campaign to eliminate claims losses

By John R. Pogue
Manager of Cargo
Delta-C&S Air Lines



Modern handling equipment, packaging improvements, and employe education keep the airlines claims loss ratio at less than one per cent of revenue

SPEED ALONE is not enough. Overnight delivery of airfreight is nullified unless the merchandise is placed in the customer's hands in good condition.

When the major airlines began airfreight service shortly after World War II information as to the effects of temperatures encountered at high altitudes, results of pressurization, and other factors peculiar to the transportation of various commodities by air, was limited. As a result, handling of many perishables was necessarily undertaken on a more or less "trial and error" basis.

When claims for damage resulted, the carriers—starting with investigation of handling made by the Claims Department—began a program of modifying handling procedures. They worked with container manufacturers and shippers to prevent recurrences. As a result of this program, claim departments have become an important factor in the prevention of loss and damage claims.

Concerted Program

At present, there is a concerted airline industry program underway to reduce, or if possible eliminate completely, claims resulting from improper handling of shipments in transit. This is being implemented by a monthly poster program which depicts the major causes of cargo damage and their solution.

Crushing of fragile shipments, for example, usually is the result of loading heavy pieces on top of less rigidly crated shipments. Therefore, one poster will stress, "Put the heavy ones on the bottom."

In cooperation with the shippers, changes in packaging of many types of commodities have been made. Notable in this connection is the work of transcontinental air carriers with West Coast flower shippers in developing a wax lined carton that has more resistance to weakening caused by melting of the refrigerant.

Other airlines have worked closely with tropical fish shippers in the Florida area in the development of a plastic bag container. The same type of cooperation between the air carrier and the shipper—with able assistance from the packaging and materials handling industries—is to be found in almost every other field from heavy machinery, television sets and drugs to baby chicks and women's clothing.

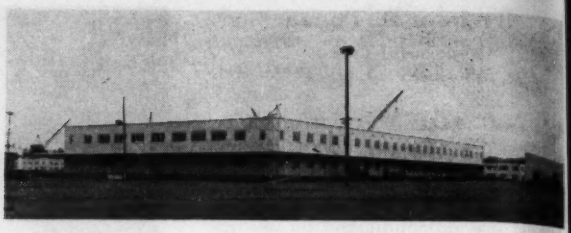
Improvement, correction or modification of packaging used is not of itself the solution to prevention of damage to shipments enroute. It must be supplemented by an intelligent approach to the proper handling of the shipment.

In answer to this phase of claims prevention, one line has had success in demonstrating to airfreight handling personnel the necessity for careful handling of flower shipments by use of a demonstration shipment.

The model is purposely mishandled, then opened to show the results. Pictures are taken of this demonstration and prints are furnished all stations. One of the major carriers will have available shortly a full length movie illustrating proper and improper handling of shipments. This film will be shown at all major terminals.

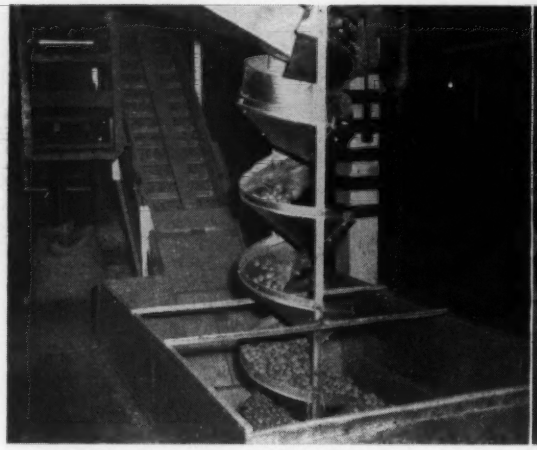
Interline handling of shipments has been streamlined by the use

(*Please Turn to Page* 67)

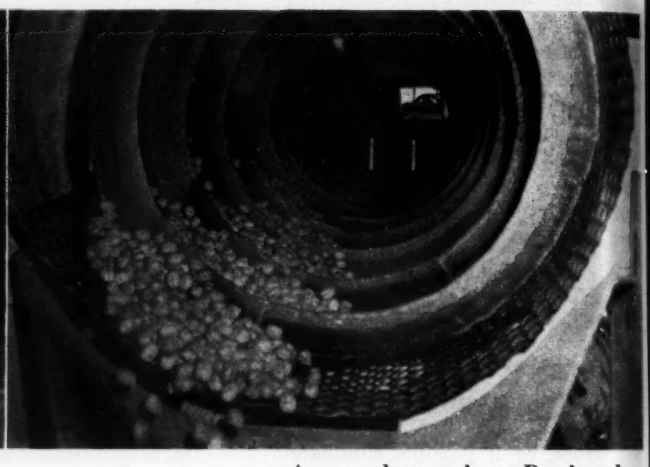


Swan Island warehouse of Northwest Nut Growers Assoc.

Nut Growers Solve Distribution Problems



Spiral chute in the foreground lets nuts down gently to avoid any shell damage



A new walnut grader at Dundee plant rotating drum grades automatically

PROBLEMS of handling and distribution of a $3 million annual nut crop are being dealt with efficiently by the Northwest Nut Growers, Dundee, Ore.

This organization is a grower-cooperative unit composed of a majority of the filbert and walnut growers in Oregon and Washington. Primarily, it is concerned with the marketing of member crops, and the performance of processing and packaging operations.

Sales Organization

Selling is done by the group's own sales staff through 90-odd food brokers. They are strategically located throughout the United States, Canada, Cuba and Puerto Rico. In addition, one man serves as a direct representative and works in cooperation with the various brokers from his headquarters in Chicago.

Although the main headquarters is at Dundee, and all marketing activities are directed from there, contact with most growers is through various individual packing units, which actually compose the Northwest Nut Growers.

These units obtain their own members and operate their own processing plants. When a grower becomes a member of a unit, he also becomes one of its owners and indirectly an owner of the Northwest Nut Growers.

After processing by the units, nuts are shipped to the Northwest Nut Growers' packaging and shipping warehouse on Swan Island, Portland, Ore. Operations there include receiving and shipping, warehousing, cellophane packaging, and vacuum canning of shelled nuts.

Shipping Schedule

The next step is shipping from Swan Island. Points west of the Mississippi River are served jointly by rail and motor freight, the two systems being highly competitive to this point.

In comparison, the organization has found that it is cheaper to ship its nuts by rail to points

By Warren E. Crane

Northwest Nut Growers unite to establish modern handling and distribution scheme; results include better marketing - selling program and more efficient nut processing

An interior view at the Association's modern nut shelling plant, Dundee, Ore.

Palletizing and fork truck handling in N.N.G. warehouse facilitates storage

Night unloading scene at Swan Island. Careful scheduling avoids bottlenecks

Fork truck is used to load freight car with Blue Pirate filberts, Newburg, Ore.

lying east of the Mississippi, as rail rates remain constant.

NNG tries to select warehouses in every city in which it maintains brokers. Warehouses generally are selected on the basis of their location and capability to efficiently serve the purchaser.

At times the organization finds it advisable to send spot shipments to the East in addition to those which have been arranged in advance. Railroads permit shippers to make unscheduled stops at which any quantity can be unloaded at a price of about $10 per stop. This enables the organization to serve smaller markets and make partial deliveries.

In bigger metropolitan markets, lots are larger. The buyer may be located on a spur track and it may be possible to shunt a car to his dock. In other cases, there are pool cars

(*Please Turn to Page* 64)

Fig. 1 (right): The test is best run by two men, one driving over the test run, the other recording readings

Fig. 2 (below): Test sheet A reveals an inferior truck performance. B illustrates economical truck operation

LIFT & FORK TRUCK TEST DATA (A)

CUSTOMER Brownley Automotive Company ADDRESS Wayton, Ohio
TYPE OF TRUCK JEEP Fork Truck MODEL Nº A-2304-8
SERIAL Nº 28403 LOAD 2000-48,000#* LOAD MOMENT ARM 24"
BATTERY 16-15 TLM Exide Stl. at 13-1/4" OPEN CIRCUIT VOLTAGE 31
DRIVE MOTOR MK TYPE ET 17 SERIAL Nº 179252
HOIST MOTOR MK TYPE ET 11 SERIAL Nº 180541
DRIVE WHEEL TIRES Goodyear TIRE SIZE 18 x 5
TRAIL WHEEL TIRES U. S. TIRE SIZE 10 x 5
CONTROLLER Contractor MODEL NUMBER 3 Speed
DATE OF TEST 4/8/51 TESTED BY SB & BRC

TRAVEL PERFORMANCE LIGHT

DIRECTION OF TRAVEL	AMPS.	VOLTS	SEC.-88'	F.P.M.	M.P.H.
OPERATOR LEADING	65	28	13.1		4.58
LOAD LEADING	65	28	13.1		4.58
OPERATOR LEADING					
LOAD LEADING					

WATTS PER TON PER MILE PER HOUR = 147

TRAVEL PERFORMANCE LOADED

DIRECTION OF TRAVEL	AMPS.	VOLTS	SEC.-88'	F.P.M.	M.P.H.
OPERATOR LEADING	73	28	14.6		4.1
LOAD LEADING	74	28	14.8		4.05
OPERATOR LEADING					
LOAD LEADING					

WATTS PER TON PER MILE PER HOUR = 134

HOIST PERFORMANCE

	LIGHT		LOADED	
	MAIN	TEL.	MAIN	TEL.
AMPS.	75	70	180	135
VOLTS	28	28	28	28
TIME &	3.75	3.6	6.1	5.2
DISTANCE	2'	2'	2'	2'
F.P.M.	32.5	33.5	19.6	23.4
PRESSURE				

LOWERING SPEED: LIGHT | LOADED

WEIGHT LOADED: DRIVE 6320# TRAIL 1040# TOTAL 7390#
WEIGHT LIGHT: DRIVE 2250# TRAIL 3155# TOTAL 5390#
RIGHT TURNING RADIUS 67
LEFT TURNING RADIUS 59
TILT FORWARD ____ DEGREES
TILT REVERSE ____ DEGREES

OVERALL LENGTH ____ OVERALL WIDTH ____ COLLAPSED HEIGHT ____
WHEEL BASE ____ PLATFORM SIZE ____ FORK SIZE ____
MINIMUM ELEVATION ____ MAXIMUM ELEVATION ____ TEST: 1 2 3 4
REMARKS: Truck performance not checked for six years.

LIFT & FORK TRUCK TEST DATA (B)

CUSTOMER FRI Manufacturing Company ADDRESS Skiladelphia, Pa.
TYPE OF TRUCK JEEP Fork Truck MODEL Nº A-2304-8
SERIAL Nº 27611 LOAD 2000-48,000#* LOAD MOMENT ARM 24"
BATTERY 16-15 TLM Exide Stl. at 13-1/4 OPEN CIRCUIT VOLTAGE 31
DRIVE MOTOR MK TYPE ET 17 SERIAL Nº 179521
HOIST MOTOR MK TYPE ET 11B SERIAL Nº 180483
DRIVE WHEEL TIRES Goodyear TIRE SIZE 18 x 5
TRAIL WHEEL TIRES U. S. TIRE SIZE 10 x 5
CONTROLLER Contractor MODEL NUMBER 3 speed
DATE OF TEST 5/8/51 TESTED BY DF

TRAVEL PERFORMANCE LIGHT

DIRECTION OF TRAVEL	AMPS.	VOLTS	SEC.-88'	F.P.M.	M.P.H.
OPERATOR LEADING	53	30	11.0	481	5.46
LOAD LEADING	53	30	11.0	481	5.46
OPERATOR LEADING					
LOAD LEADING					

WATTS PER TON PER MILE PER HOUR = 106

TRAVEL PERFORMANCE LOADED

DIRECTION OF TRAVEL	AMPS.	VOLTS	SEC.-88'	F.P.M.	M.P.H.
OPERATOR LEADING	62	29½	12.0	440	5.00
LOAD LEADING	61	29½	12.2	433	4.92
OPERATOR LEADING					
LOAD LEADING					

WATTS PER TON PER MILE PER HOUR = 97

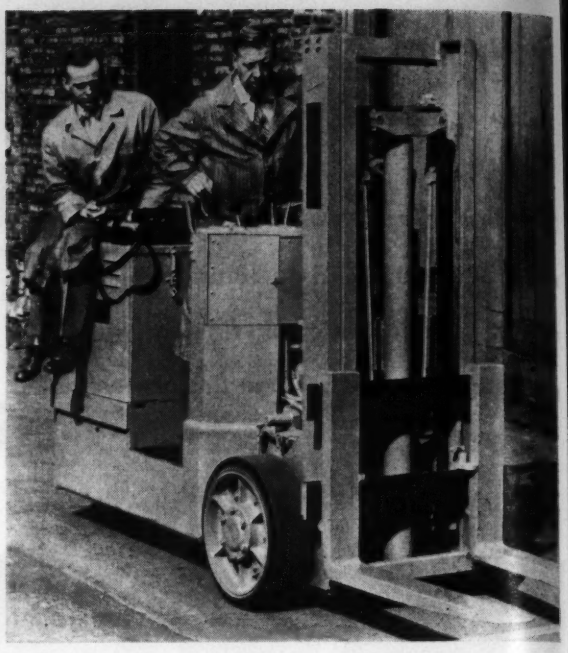
HOIST PERFORMANCE

	LIGHT		LOADED	
	MAIN	TEL.	MAIN	TEL.
AMPS.	65	70	130	135
VOLTS	30	29½	29	28½
TIME &	2.8	3.0	4.6	4.8
DISTANCE	2'	2'	2'	2'
F.P.M.	42.9	40.0		25
PRESSURE				

LOWERING SPEED: LIGHT 15.0 | LOADED 15.2
TOTAL 7500 | TOTAL 5500
TILT FORWARD 3 DEGREES
TILT REVERSE 10 DEGREES

WEIGHT LOADED: DRIVE ____ TRAIL ____ TOTAL 7500
WEIGHT LIGHT: DRIVE 2240 TRAIL 3250 TOTAL 5500
RIGHT TURNING RADIUS 59½"
LEFT TURNING RADIUS 60"

OVERALL LENGTH 92" OVERALL WIDTH 36" COLLAPSED HEIGHT 83"
WHEEL BASE 34" PLATFORM SIZE ____ FORK SIZE 1½ x 5 x 36 in.
MINIMUM ELEVATION 1½" MAXIMUM ELEVATION 120" TEST: 1 2 3 4
REMARKS: Weights shown include operator.



Fork Truck E

Fork truck performance check, conducted by you in your plant, tells if trucks are giving top performance, indicates in advance when adjustments or major overhauls are needed

By Harold Milz, *Chief Engineer*
Mercury Mfg. Co., Chicago, Ill.

WELL-DESIGNED, properly-maintained electric-powered industrial trucks should operate at between 100 to 120 *watts* per *ton* per *mile* per *hour*.

If your trucks are consuming power at this rate, they are running efficiently. If more than 120 watts are required, they are consuming considerably more

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Equipment Needed

The following equipment and facilities are needed to conduct the fork truck efficiency test:

1. A 0 to 500-amp ammeter (with several shunts for lower scale readings).
2. A 0 to 100-volt voltmeter.
3. A stopwatch graduated to tenths of a second.
4. A platform scale large enough to weigh the truck and its load.
5. A smooth, level concrete floor approximately 200 ft long.

Fig. 3

Essential Facts To Be Included

The following facts are absolutely essential to the test and should be recorded on the data sheet, as shown in Fig. 2.

1. Truck weights, both loaded and unloaded (drive wheel loads, trail wheel loads, and total loads).
2. Travel time required to traverse a measured course in forward and reverse directions, both loaded and light.
3. Time required for forks and telescopic mast to travel a measured distance, both light and loaded.
4. Left and right turning radii.
5. Forward and backward tilt angles.

Other facts that it is advisable to include are: Date of test, number of test, test personnel, type of battery, and corrective steps recommended and taken.

Fig. 4

Efficiency Test Spots Troubles

power than they should—they are wasting both your power and your dollars and are on their way to breaking down.

Make Your Own Test

If you are unwilling or unable to have the manufacturer run an efficiency test on your electric powered handling equipment, you can conduct your own test.

The following industrial-truck efficiency test — requiring only a few test readings and simple calculations—will give you the necessary facts. With this test you will be able to evaluate the operation of both your fork-lift and your platform-lift trucks.

The figures it provides will be useful to you in two ways: 1. They will tell you whether or not your trucks are performing economically. 2. They will help you determine when your trucks need minor adjustments or major overhauls.

In most cases, operating efficiencies can be restored with a few simple adjustments—slight deviations from satisfactory power consumption being the clue. However, when test figures indicate performance is far below par, major repairs may be required to eliminate serious damage to electrical and mechanical components of the truck.

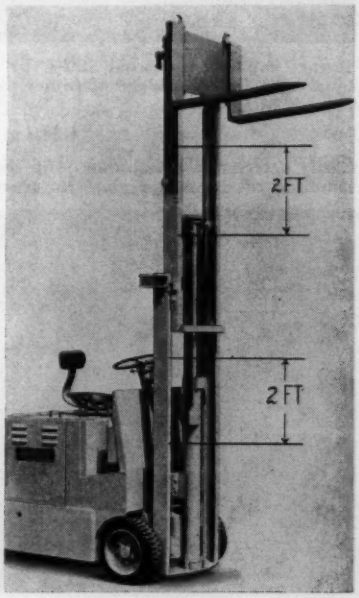
Equipment and facilities needed to conduct the test are shown in Fig. 3. Facts absolutely essential to the test. and that should be recorded on the data sheet, are shown in Fig. 4.

Test Data Sheets

For ease of calculation and to provide a permanent record, your

(*Please Turn to Page* 60)

Fig. 5. Two-foot distance on main and telescopic masts for hoist test



Warehouse capacity increased 500%, handling and labor costs nosedived when this foundry used a fleet of fork trucks to tackle its handling job

Westinghouse Cuts Handling Costs $37,000 Annually

Storage capacity increased 500% by palletizing patterns, damages greatly lowered as well as danger of injury to employes at annual saving of $8400

Easily detachable drum shoes slip on over the forks, eliminating manual handling of drums on platform trucks and pallets, saving $1400 a year

MECHANIZED handling with 17 fork trucks saves more than $37,000 yearly at the Trafford, Pa., foundry of the Westinghouse Electric Company. Used often in the actual foundry production, the Trafford trucks are of primary importance in all supporting phases of the operation. Loading and unloading bagged material, handling barrels and storing patterns—all done manually in the past—are now accomplished rapidly and efficiently.

A switch from manual to mechanical handling of materials essential in production, resulted in a $21,000 saving in warehouse labor, and increased storage capacity. The latter was made possible by the trucks' ability to stack palletized material right up to the rafters. Indirect benefits — less damage to stored materials, improved housekeeping, fewer lifting accidents—also were realized.

Pattern Handling

Formerly, the patterns were stored without pallets in the storage area. Pattern handling was accomplished by wrestling the patterns onto carts and off again, and then placing them in position by standing them on end. The larger patterns were loaded onto carts by an overhead crane. If they were light enough, they were hauled to the pouring station by using four-wheel hand trucks.

Manual handling of even the "light" patterns, Westinghouse realized, was inviting injuries and

This bagged material received at the Trafford, Pa., foundry previously was manually unloaded and hauled to storage

Mechanized unloading of palletized bags and firebrick saves the company $6000 annually over old manual method

...ostly unemployment compensation. At the same time foundry handling men saw that the storage of these patterns took up much more room than it should have, and that travel time and man-hours involved in hauling the patterns could be cut drastically.

Capacity Increased 500%

Now, the patterns are lifted, transported and tiered in racks by industrial trucks. Westinghouse has found that patterns last longer due to more careful handling and storage capacity has been increased 500% by using all available floor space and higher stacking methods. Mechanized handling of patterns has resulted in a substantial savings of $8400 per year.

A large portion of the ingredients (wood flour, sea coal, blackening, mogul, pitch, etc.) used in the foundry are received in bags. Although many Westinghouse suppliers in the vicinity now ship their material on pallets, Westinghouse palletizes the remaining material for easier handling.

Firebrick, another hard-to-handle material, is also palletized either by the supplier or by Westinghouse upon arrival at the plant. Unloading firebrick one at a time used to not only waste manpower and energy, but also resulted in considerable loss since the bricks are easily broken.

The Trafford foundry has found that this method of mechanized unloading in general saves the company $6400 a year.

Detachable drum shoes are available for the Westinghouse trucks which are used for regular pallet handling jobs. When barrels are handled, drum shoes can be easily slipped on over the forks.

Warehouse Savings

$21,000	Labor
8,400	Mechanized handling of palletized patterns
6,400	Mechanized handling of palletized bags and firebricks
1,400	Handling barrels with fork truck drum shoes
$37,200	Total Savings

PLUS: 500% Increased Capacity

Trafford materials handling men first investigated pallets for drums, too, but this was found to be impractical due to the wide variety of barrel sizes. Fork truck handling with drum shoes was found to be the best solution . . . saving the company $1400 a year over the old method.

Sand Biggest Item

The biggest handling item in a foundry is sand and Westinghouse again has used modern "know how" to simplify its transport and reduce the cost. Most sand is delivered by highway trucks and dumped onto the foundry floor directly over grates. The sand drops through the grates to a conveyor and then feeds through a dryer to remove the moisture. Moving onto a shaker screen where the lumps are shaken out, it moves to an elevator and to the main distribution belt. Plow offs are used to direct the sand off the main belt into hoppers over the molding areas.

Coremakers sand is tapped off into carts and pushed to the coremakers bench. Approximately 800 molds per shift are poured ranging from several pounds to 90 and 100 tons. •

A Nation's Experiment That Fa

Five years of nationalized transportation has left Great Britain with a £31,000,000 progra

By G. Lloyd Wilson
Professor of Transportation
University of Pennsylvania

FIVE years of experience with nationalized transport in Britain have failed to produce the results so confidently predicted by leaders of the Labor Party who sponsored transport nationalization.

British Pattern

Under provisions of the Transport Act, 1947, transport undertakings were required by the Government on Jan. 1, 1948—either upon the basis of the average prices of the railroad securities on the London Stock Exchange for six selected days in 1947, or upon valuation of properties based upon depreciated original cost, plus severance damages for retirement from business.

Payments for transport properties acquired by the government were made in either British transport stock, or, in the case of the acquisition of small road transport operations or railroad cars, by cash.

The transport stock is a direct obligation of the Government guaranteed by the Treasury and charged to the Consolidated Fund of the United Kingdom.

Interest is paid at the rate of from 3—3½ per cent on the Stock, in accordance with regulations for the acquisition of the properties at the prices prescribed by the Minister of Transport.

Arbitration Tribunal

The Transport Arbitration Tribunal was set up by the 1947 Act, to settle disputes arising out of the compensation paid for the transportation enterprises. At the end of 1952, the last year for which statements are availbale, the amount of stock outstanding was about £1,310,000,000, which bears interest at the rate of 3—4 per cent per annum. Total short and long term liabilities aggregated about £1,516,000,000.

In November 1952, £120,000,000 of British Transport Stock was issued at 95½ to refinance a load of 1¾ per cent one year stock, and to replenish the depleted resources.

The assets of the British Transport Commission aggregating £1,-467,000,000 include approximately £64,000,000 represented by good will, a large portion of which consists of the value of road transport enterprises acquired through nationalization.

The cumulative deficit for the years 1948-52 amounted to £35,-000,000. There were deficits of £4,-700,000 in 1948; £20,800,000 in 1949; and £14,100,000 in 1950. There was a small surplus of slightly over £100,000 in 1951, and a somewhat larger surplus of £4,-500,000 in 1952. A special adjustment in 1952 reduced the accumulated deficit to £31,500,000.

At the apex of the British nationalizd transportation organization is the minister of transport, a Cabinet member responsible to Parliament. The British Transport Commission, consisting of a chairman, deputy chairman, three other full-time members, and three part-time members, is appointed by the minister.

The Commission has the responsibility of conducting the entire nationalized transport enterprise so that revenues may not be less than the amount sufficient to meet all changes taking one year with another. The Commission makes its annual reports directly to Parliament, and the minister of transport is instructed by the Act to give the Commission directions in matters which appear to effect the public interest.

Subordinate to the British Transport Commission, undertakings are managed by public authorities or bodies called Executives, composed of not less than four nor more than eight members.

The Executives are corporate bodies with perpetual succession and legal identity which function as managing agents of the British Transport Commission. The Executives serve in the same general way as the management of pure business enterprises, but are subject to the control of the Transport Commission and, ultimately, through the minister of transport, to Parliament.

Management Units

The nationalized management organization consists of The Railway Executive; The Road Haulage Executive; The Road Passenger Executive, which was abol-

A Lesson Worth Learning

Five years of nationalized transport in Great Britain have demonstrated several things of great importance to the United States, where transportation legislation has followed the British pattern for more than half-a-century:

1. Nationalization of transport has not facilitated coordination of different agencies of transportation, particularly rail and highway. Many believe that nationalization actually hampered coordination.

2. Nationalization has not been the ideal employer predicted by trade unions and the Labor Party. Railway workers have expressed dissatisfaction with wages, and with the failure to obtain improved working conditions and a voice in management.

3. Nationalization resulted in an operating deficit for the composite operations aggregating over £31,000,000 and averaging about £6,000,000 a year in the five years for which reports are available.

4. Nationalization caused a large increase in private motor transport operation, which, in turn, precipitated the disposal of the road haulage vehicles provided for by the 1953 Transport Act, and the prospective loss of good will acquired when the motor haulage enterprises were purchased in 1947.

5. Traders have expressed opposition to nationalization because it has deprived them of the choice of modes of transportation and curtailed the force and scope of competition. Shippers have been forced to provide their own transportation, and have done so rapidly.

6. Nationalization has not provided the improved rate scheme and improved railway operations through decentralization, as promised.

t Failed

program deficit

ished Oct. 1, 1952, and the work divided, under a scheme of delegation, to the Telling Group and the Scottish Omnibus Group; The Docks and Inland Waterways Executive; the London Transport Executive; and the Hotels Executive.

Each of these Executives manages the enterprises under their respective jurisdictions. They are subject to the over-all policy administration of the British Transport Commission, and the policy formulation of the minister of transport and Parliament.

The Railway group administers nationalized railways through regionalized officers in charge of decentralized organizations. At the outset, the Railway Executive was highly centralized, but the experience under this type of control was unsatisfactory, and the organization was modified by increasing the authority of chief regional officers.

The Road Haulage Executive is responsible for management of road transport goods vehicles engaged in intercity freight on goods haulage. Local motor transport operations generally within a radius of 25 miles, and certain specialized movement, such as liquids in bulk in tank vehicles, fresh meats, livestock, lumber, household goods, and heavy indivisible loads in special vehicles, were not nationalized.

The London Transport Executive administers all passenger transportation facilities in the London Metropolitan Area—subways, trains, busses, and suburban railway facilities—formerly operated by the London Passenger Transport Board.

The Docks and Inland Waterways Executive administers docks, harbors, and canal facilities, and operates about one-fifth of the carrying facilities engaged in inland waterway services, transporting chiefly coal and general merchandise.

Working Results

Consolidated working results of operation in 1952 produced gross traffic receipts of £620,630,069, working expenses of £575,362,135, and net traffic receipts of £45,-267,934 from all nationalized transport operations.

The machinery for nationalized transport administration provided for a Central Consultative Committee and Area or Regional users Consultative Committees to consider matters affecting the services and facilities provided by the British Transport Commission.

Members of these Central and Area Consultative Committees are appointed by the minister of transport from nominees made by the Transport Commission. They represent agriculture, industry, commerce, labor, and local governmental authorities. At least one member of the Committee is required to be a member of the Commission.

The Act provides that separate committees must be set up for Scotland and for Wales, and every part in the United Kingdom must be within the territorial jurisdiction of a Transport Users Consultative Committee.

These committees function chiefly in advising the Commission

(*Please Turn to Page* 58)

Supreme Court Decisions Affecting Distribution Costs

In this era of high-priced manpower and small return on the invested dollar, carriers and their customers keep a sharp eye on the 'little things' affecting the cost of distribution — here are some recent court rulings which could mean the difference between profit and loss

By Leo T. Parker
DA Legal Consultant

IN DISTRIBUTION, where the dividing line between profit and loss is a thin one, high court decisions which affect costs are of no small interest to all concerned.

There have been a number of such decisions in recent months, not the least important of which involve the controversial new ICC Trip Leasing Regulations.

Although two of the more bitterly contested sections of Ex Parte MC-43—those dealing with method of compensation and 30-day leasing—have been postponed until March 1, 1954, the issue is still a live one. (See DISTRIBUTION AGE, September, 1953, Page 26.)

Decisions on Record

Regardless of the ultimate fate of the two postponed sections, and the Senate still has to act on a House-passed bill which would prohibit the ICC from regulating the duration of any lease, United States Supreme Court decisions are on record which confirm the legality of the complete Regulations.

Attacks were made upon the ICC rules in six suits filed by motor carriers and carrier associations, and by the Secretary of Agriculture in various Federal District Courts, seeking to enjoin the order putting the rules in effect. The District Courts for Northern Alabama and Southern Indiana denied the injunctive relief prayed for—ATA v. United States, 101 Fed. Supp. 710, 1951, and Eastern Motor Express v. United States, 103 Fed. Supp. 694, 1952.

The cases came to the Supreme Court of the United States on appeals from these District Courts. The suits challenged the lawfulness of the Commission's order and rules governing truck leasing chiefly upon the provisions requiring a 30-day period of control and the prohibition of compensation based upon division of freight revenue between the lessor and lessee.

These rules had the effect of abolishing trip-leasing, the real bone of contention, and the source, in the view of the ICC, of the abuses sought to be eradicated.

Majority Opinion

The Supreme Court, in the opinion of the majority delivered by Mr. Justice Reed, with six Justices concurring, refused to consider the economic problems involved, and decided the case upon the legal considerations.

With respect to the legal question of the power of the ICC to regulate leasing practices among motor carriers in the absence of any express power to control, regulate or affect leasing practices, the Court held that the absence of an express provision of the Interstate Commerce Act did not prohibit the Commission from exercising authority to so act in the interests of prohibiting evil practices within its general regulatory responsibility.

Arbitrary Expansion

The court rejected the contention that the Commission rules governing leasing represented an attempt by the Commission to expand its power arbitrarily, because it found that the order was supported by "clear and adequate evidence of evils attendant on trip-leasing." It found that the rules were "aimed at conditions which may frustrate the success of the regulation undertaken by Congress."

The Court also rejected that the rule-making authority conferred upon the ICC by the Interstate Commerce Act was solely administrative and related only to agency procedures. This interpretation of

the Commission's rule-making authority would deprive it of its power to regulate the transfer of operating authority under such rules and regulations as it may prescribe, specifically granted by the Act.

Public Interest

The Court found the Commission's rules not invalid under the National Transportation Policy of the Congress which declares that regulation shall be in the interests of the preservation of the inherent advantages of all modes of transportation and of an economically sound, safe, and efficient industry.

The Court found the rules justified as reasonable and not arbitrary. It found that they were consistent with the regulatory scheme they were designed to protect, and there was a reasonable relationship between the rules and the exemptions under them.

They were found not to violate the motor carriers' rights to augment their equipment, but only to restrict the carriers in securing and using leased equipment by preventing arrangements which would not satisfy the Commission's safety, loading, and licensing rules. The Court stated that a rule placing a numerical limitation upon the acquisition of vehicles by carriers through lease arrangements would be invalid.

Agricultural Exemption

The Commission's rules were found by the Court not to impair or nullify the statutory exemption of vehicles engaged in the transportation of agricultural commodities, despite the fact that the restriction of the leasing of the vehicles used in these services, when used in non-exempt services, to a minimum lease period of 30 days would drastically reduce the leasing of these trucks.

The Court dismissed also contentions that the rules had been promulgated in violation of the requirements of the Administrative Procedure Act, and that the carriers had been denied the right in the District Court to introduce evidence of confiscation. It observed that "the Commission has merely determined by what method the carrier income is to be produced, and not how much it may charge."

(*Please Turn to Page* 59)

By Francis George
Attorney-at-Law

Delivery Truck Liability Clarified

Children playing on parked vehicles present several special liability risks for distributors

ONE OF the least considered and most easily controlled hazards of door to door delivery is the risk of children hooking rides.

Back in 1918, in a case involving a furniture van and a nine year old boy who fell from the tail gate and was seriously injured, a judge said in deciding the case in favor of the distributor who owned the van that the driver cannot be expected to drive the vehicle, watch the road as well as look out for small boys hooking rides on the back of the truck.

"The law does not impose such duty on one lawfully operating a vehicle along a public street," the judge stated. And that rule of law still governs the situation where a boy hooks a ride on a moving delivery vehicle.

However, a very different rule exists when the truck is parked.

A New York bakery lost an expensive law suit recently. The driver parked his truck and went inside a small store to make a delivery. A five year old boy accidentally started the truck. As soon as it got under way, he jumped out and fell under the wheel.

The judge said "that a dangerous attraction in a public highway may impose liability to a child on the part of the one responsible therefor, because of failure to exercise due care (although there would be no liability if the attraction were on private premises where the child had no right to go) and that it was the duty of the operator of the motor vehicle, when he permitted it to be unattended, to leave it in such condition that it could not be put in motion except by the intervention of an external cause not to be anticipated or guarded against."

In effect, this means that delivery vehicles on the street must always be locked if unattended.

Distributors who deliberately attempt to attract crowds to a vehicle in advertising promotions, such as ice cream vendors, run some risks that are almost impossible to insure against.

If a customer leaves a parked truck to which he has been attracted and is struck by a passing vehicle there is an excellent possibility that ordinary liability insurance will not protect the distributor and that he can be forced to pay the damages.

A brightly painted truck, with balloons and banners used by a Georgia bottler to promote his product has been called an "attractive nuisance." The distributor was sued for some $10,000 when a boy was killed attempting to steal a ride.

Whenever a promotion involving moving vehicles is planned, the insurance policies covering those vehicles should be checked to be sure they cover this risk.

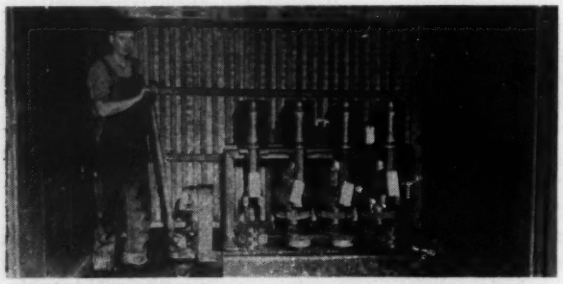
If delivery personnel have instructions to always lock unoccupied vehicles and the rule is enforced, there is little risk of losing this type of lawsuit in day-to-day operation. The unusual vehicle that attracts a crowd is the real trouble-maker for its owner. •

Elevators Provide Key To Multi-Story Efficiency

These three multi-story plants have met the handling challenge with automatic elevator service

This heavy-duty Otis elevator at the Methodist Publishing House accommodates up to 20,000 lb in inter-floor traffic

A self-leveling, three-stop elevator at Owens-Corning Corp. is utilized for hauling glass fibre scrap from the basement



SI&SF Railway repair shop heavy-duty elevator hauls parts to first-floor repair bays from second-floor storage area

ALTHOUGH the trend in recent years has been to single-story construction, many firms have held to the multi-story principle. Some highly efficient handling and distribution schemes have been developed in these multi-story plants.

Briefly described below are three new multi-story plants, each one of which has built a solid handling scheme on the foundation of good elevator service.

In planning its new diesel locomotive repair shop at Springfield, Mo., the St. Louis and San Francisco Railway wanted to be able to store heavy diesel parts on the second floor, above the locomotive repair bays.

Between the ground level and the second floor of the shop, the railroad installed a heavy-duty Otis freight elevator capable of carrying up to 10,000 lb. The elevator has modern collective type controls, so that it can be operated self service by regular employes. Doors at each end of the car permit greater flexibility.

From the ground up, the new Nashville, Tenn., plant of the Methodist Publishing House was planned for the use of fork trucks to move loaded skids. To facilitate handling, a heavy-duty elevator was constructed to take the extra stresses of power-truck operation.

The elevator carries four skids of material, plus the fork truck, weighing as much as 20,000 lb. The truck operator places three skid loads on the elevator, then rides on with the fourth. This procedure is reversed at the destination floor. The elevator also is the automatic collective control type, with a key-switch for either self-service or attendant operation.

Owens-Corning Fiberglass Corp.'s new plant at Anderson, S. C., makes good use of a three-stop, self-leveling elevator to carry glass fibre scrap from the basement to the main floor and for feeding some ingredients into the furnace on the mezzanine level.•

For prompt service, use the postage-free postcard provided here for your convenience in securing FREE LITERATURE and NEW PRODUCTS information described in this issue of DISTRIBUTION AGE. All material FREE, unless otherwise noted, as in the case of text books and some pamphlets.

Industrial Flooring

A 20-page booklet describing the importace of good floors in industrial, institutional and public buildings is announced by The Monroe Co., manufacturer of 44 floor resurfacing and repair products. The result of many years of Monroe research in flooring problems, the new brochure explains the differences between floor requirements for various industries.

Circle 9 on Service Card, Page 34

Post Moving Reprint

"Adventures of the Moving Men," a feature article by Henry F. and Katherine Pringle, which appeared in the August 22 issue of the *Saturday Evening Post* is available from the Security Storage Co.

Circle 10 on Service Card, Page 34

Fibreboard Pallet

A new descriptive brochure has been released by the Mead Corp., describing their Poke-Pak, a sheet of paper board about .10 in. thick. A formed flap along one edge, permits the tapered forks of a truck to slide under the load, even without a pallet. Low in original cost, and requiring no maintenance, they can be thrown away after one using.

Circle 11 on Service Card, Page 34

Engineered Crane Applications

American Monorail Company has issued a new portfolio containing an illustrated brochure describing their complete line of industrial cranes plus a series of 20 installation reports illustrating the "engineered application" of their equipment. Diagrams and photographs show savings in time, labor and money in varied national industries.

Circle 12 on Service Card, Page 34

Tying Machine

The Inland Model "D" Tying Machine is described in a new bulletin released by the Inland Wire Products Co. The machine ties the wire in a few seconds and puts small and medium size package handling on a production-line basis, man-hour output is stepped up and costs are lowered considerably, the bulletin states.

Circle 13 on Service Card, Page 34

Lift Truck Parts

Lift Parts Mfg. Co. Inc. are able to supply practically every lift truck part on short notice. Their new 1954 catalog, listing over 5,000 replacement items, also contains a list of their warehouses and distributors in the United States and foreign countries.

Circle 14 on Service Card, Page 34

No. 3 Booklet of The Library of Know-How

"Material Handling—Plant Layout, Maintenance and Relationships to Other Departments," the third in the Material Handling Institute's Library of Know-How series, has just been released.

The booklet discusses those relationships—not as fixed departments in an industrial organization, but as functions of planning and managing an industrial organization.

Planning an efficient materials handling system requires a two-way consideration: (1) the materials handling system should be planned and managed in a manner that satisfies the requirements of all other functions; and (2) related functions should be planned and managed in a manner that stays within the capacity of the materials handling system.

Materials handling factors to be considered and their division into three man operations, receiving, processing and shipping are discussed. The related functions and their effects on the materials handling system are concisely described, including process engineering, tool design, industrial engineering, plant layout, production and material control, purchasing, production, accounting, maintenance, personnel, quality control and inspection and product design.

It will be the purpose of Booklet No. 4 of The Library of Know-How to discuss organization of the materials handling activity.

Copies of this new guide to better materials handling will be sent to readers upon request with the compliments of DISTRIBUTION AGE.

Circle 15 on Service Card, Page 34

Finance-Lease Plan

Full information on the new Finance-Lease Plan of its trucks is available from Automatic. Case histories of Automatic trucks indicate they pay for themselves in periods of less than a year. Payment of new trucks can cover a period of 6 to 36 months or leases can be obtained from 2 to 5 years, or 2 to 9 years, depending on type of equipment.

Circle 16 on Service Card, Page 34

Short Case Sealer

J. L. Ferguson Co., manufacturer of Packomatic packaging machinery, has released a brochure describing the new Packer-Gluer, a short case sealer which applies glue and seals all types of paper cases. The machine uses newest method of applying glue in spots at ¾ in. centers, which saves at least one-third of glue normally used.

Circle 17 on Service Card, Page 34

6,000-7,000 lb Trucks

Clark Equipment Co. has published new literature on its 6,000-7,000 fork trucks—Clark's gas or electric UTILITRUCS. Foundries, steel mills, stevedoring and heavy warehousing installations are illustrated utilizing these trucks under heavy-duty conditions.

Circle 18 on Service Card, Page 34

Field Reports

A series of sixteen field reports, issued by Hyster Co., illustrate actual utilization of their materials handling products by various industries, including food, bottling, lumber, scrap metal, paint manufacturing, commercial warehousing, cotton warehousing and others.

Circle 19 on Service Card, Page 34

Preventive Maintenance Manual

A new manual of procedures and applications of the White Preventive Maintenance Program has just been issued by the White Motor Co. The manual describes the White P-M program developed for truck operators who do not have their own shop facilities and illustrates how the plan is tailored to an individual truck operation.

Circle 20 on Service Card, Page 34

Furniture Pads

The complete line of Maish Maid furniture pads can be ordered from the new descriptive brochure according to The Charles A. Maish Co. Kitchen, dining room, bedroom, and living room furniture are illustrated with tailor made coverings manufactured by this 75-year-old firm.

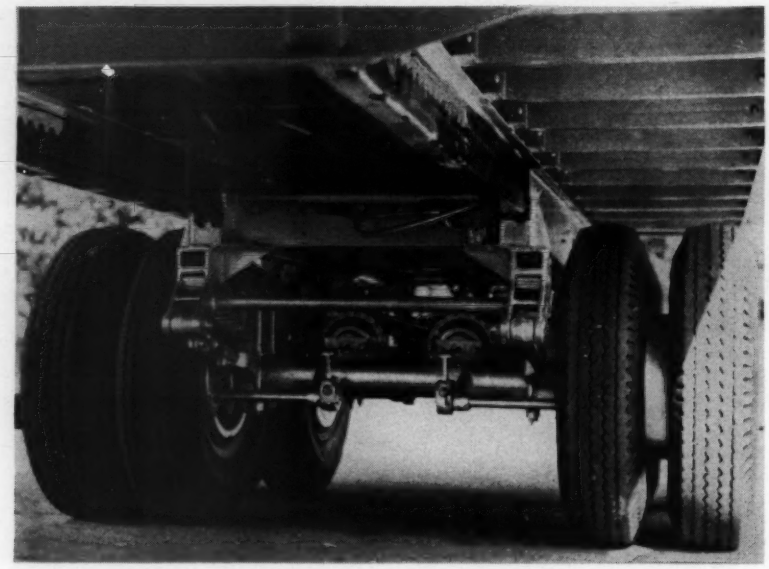
Circle 21 on Service Card, Page 34

(Please Turn to Page 56)

DA New PRODUCTS

FOR FURTHER INFORMATION USE READERS' SERVICE

Equalize Axle Loads Without Reloading



The Delay Load Equalizer is a multi-position, movable running gear, manufactured by De Lay Industries, Inc., which makes possible equally balanced axle loads after trailers have been loaded and locked. It allows operators to locate trailer axles anywhere, at 2 in. intervals, along a 14 in. slide rail.

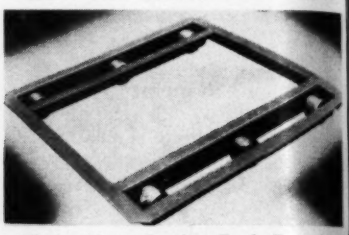
Some of the advantages of the equalizer are: eliminates segregating freight, permits changing from three axle to two axle tractors, or vice-versa, without reloading; trailers may be loaded to maximum weight and axles balanced after trailer is locked and sealed. It allows extension of the bridge in bridge formula states; solves the diminishing load problem; permits changing trailer from tandem to single axle, or vice-versa; and allows tandem to be removed for repairs and a spare inserted in minutes.

Wheels are moved by releasing the holding pins, locking trailer brakes and moving the tractor either forward or backward. Axle weights can be equalized in less than two min, according to the manufacturer.

Circle 45 on Service Card, Page 34

Truck Pallet Roller

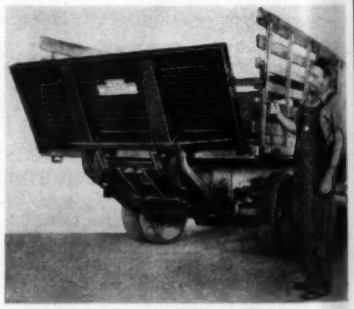
A newly designed and field tested Ace Trucker Pallet Roller is announced by Frank L. Robinson Co. Frames are of high tensile strength steel with large bearing area. Rollers are heavy gage and crowned on ends for easy rolling floor protection. The axles are hexagonal and won't turn in frame. The rollers are available in 30-48 in. sq sizes with capacity from 1800-2400 lb.



Circle 46 on Service Card, Page 34

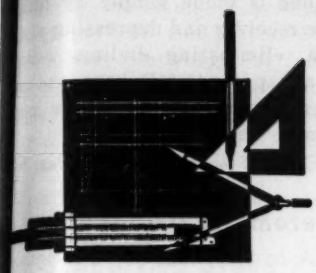
Safer Loading

New operating and safety features are incorporated in the improved Heiloader, manufactured by The Heil Co., enabling one man to handle heavy or bulky objects with complete safety and without strain. A single control lever on each side of the truck body keeps operator out of traffic when raising or lowering the tailgate. A



built-in neutralizer instantly stops mechanism when hand lever is released. Should the platform become overloaded, a safety by-pass valve stops the raising or lowering. The all-hydraulic unit can be mounted on any truck and can lift a maximum 2,000 lb payload.

Circle 47 on Service Card, Page 34



ARD....PAGE 34

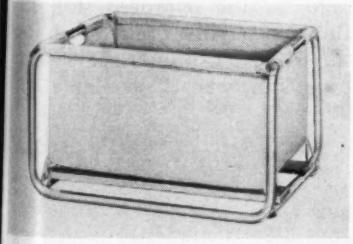
One-Man Operation

This hand model portable lift truck, designed for maximum safety with one man operation, is in production at the Safeway Industrial Equipment Corp. The truck will lift loads of 1,000 lb to a height of 53 in., operate in narrow aisles and turn easily in close quarters. Combination "snap-on" plate permits use as platform truck when forks are not required. Foot lever operation, safety release pedal and wheel lock, permit one man operation with maximum safety.

Circle 48 on Service Card, Page 34

Aluminum Framed

This new aluminum frame canvas basket, now being manufactured in limited quantity by C. R. Daniels, Inc., is available to order in any size or shape up to 3-bushel capacity. The model illustrated

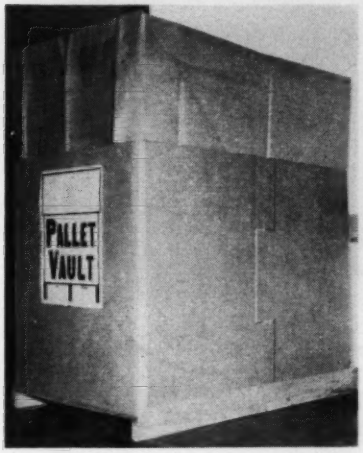


has a rugged canvas body permanently attached to the frame or made removable with snaps. A 2-bushel model weighs only 5 lb compared to a standard 2-bushel steel frame basket weighing 11 lb.

Circle 49 on Service Card, Page 34

Pallet Vault

A dust-proof package for storage of furniture on pallets called Pallet Vault, has been designed by the General Van & Storage Co. for the furniture warehousing industry. Consisting of two heavy corrugated board sides, the cover is held in place on a 42 by 72 in. pallet by two specially constructed

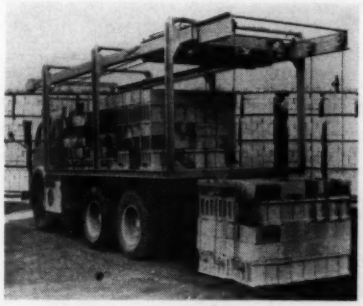


lateral-retaining strips. The sides are locked together to form a dust-proof joint. The top is made of heavy Kraft paper with sides that slip over the top of the pile, adjusting to the height of the pile and fitting closely to the walls of the box-board sides. Furniture may be securely stacked 9-11 ft. high.

Circle 50 on Service Card, Page 34

Concrete Block Lift

A new product for concrete block producers is the patented Bros Lectro-Lift material handling truck body. Carriage hooks extend down from a traveling carriage mounted in a structural heavy-duty steel frame. Only one man is needed to load, deliver, unload and stack concrete blocks and tile. Blocks can be unloaded



into excavations down to 8 ft below ground level. A 3-phase generator operated by a twin cylinder air cooled engine powers the unit. Four models are available in bed lengths of 12, 14, 16 and 18 ft.

Circle 51 on Service Card, Page 34

Two New Pick-up Models

Expansion of its "Autoette" line to include manufacture of two new electrically-powered pickup trucks, designed for light hauling, has been announced by Autoette Inc. Run by electricity only, the new models are being manufactured as

quarter-ton and half-ton models. The heavy-duty batteries can be recharged overnight and the manufacturers assert that they can be operated at a cost of 1/5 cent per ton-mile—for up to 12 hours of daily hauling.

Circle 52 on Service Card, Page 34

Handles Heavy Loads

A new 8,000-lb capacity controlled caster-steer trailer, designed to handle heavy high center of gravity loads, is announced by Mercury Mfg. Co. Provision of an

extra long wheel base and wide tire treads, provides additional stability. "C" type couplers on the rear permit its use in a trackless train system.

Circle 53 on Service Card, Page 34

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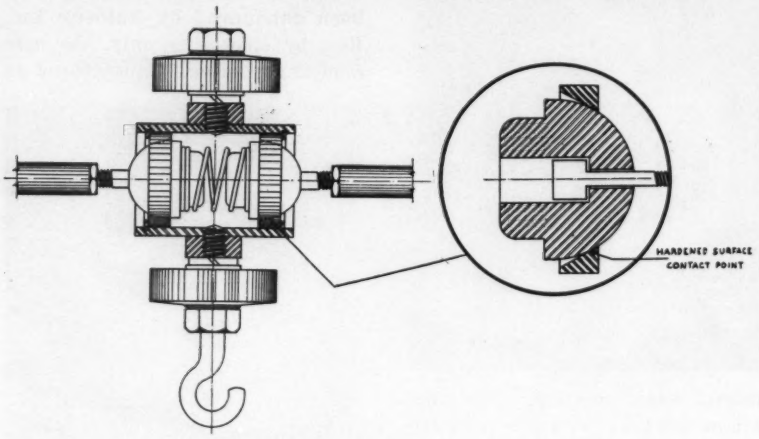
DA New PRODUCTS

Continued from previous page

No Lubrication Needed With New Conveyor



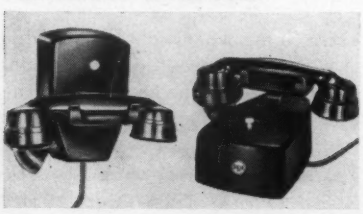
Carburizing the sock and ring assembly of the Landahl Chainless Conveyor to Rockwell Hardness C-60 eliminates the need of any lubrication throughout the entire system, according to tests recently completed by its manufacturer, Landahl Conveyor Co. The tests indicated considerably less wear to the carburized, greaseless socket and rings than to similar non-carburized, grease-packed parts.

This innovation makes it an ideal overhead system for handling any material or product which would be damaged from dripping grease, states the manufacturer. Because temperatures to as high as 700 deg. F have little effect on the working parts of the system, it is especially well suited for oven conveyor service. The system also sharply reduces the fire hazard inherent in grease-packed overhead conveyors.

The sliding movement of the socket in the ring burnishes rather than galls both pieces. As a result, the points of contact of both socket and ring becomes matched surfaces as minute wear occurs, thus making a polished union at all times. The longer the conveyor runs the better the fit becomes.

Circle 54 on Service Card, Page 34

Low-Cost Intercom



A new low-cost telephone-type inter - communications system called the "Duo-Com" is announced by RCA Victor. The simplified two-phone system provides instant natural voice communication and will operate more than a year on a single six-volt battery, claims RCA. Contact between the phone is made simply by lifting the receiver and depressing a button, eliminating dialing, switchboard, press-to-talk keys, and similar delays found in other intercom systems.

Circle 55 on Service Card, Page 34

Automatic Unloader

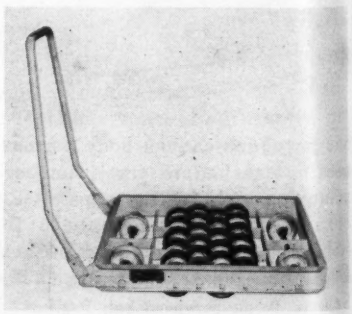
A hydraulic pusher attachment available from The Yale & Towne Manufacturing Co., makes possible the unloading of many kinds of loads by pusher action, thereby eliminating manual handling. It is particularly suitable for work in railroad box cars and highway

trucks. With the hydraulic pusher attachment, loads can be carried directly on the forks — either standard or chisel type depending upon the load. The pusher attachment is easily attached or removed as required.

Circle 56 on Service Card, Page 34

Pallet Dolly

Maneuverability, ease of operation and ability to roll on rough or slatted floors are the advantages of the improved Roll Rite Universal Pallet Dolly, manufactured by Roll-Rite Corp. Twenty-four 6 in. wheels, available with

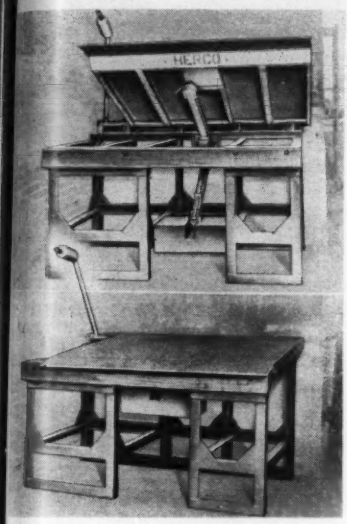


ber or aluminum alloy tread, pport the load and provide sur- e contact on rough surfaces. e pallet dolly has a 360 deg rning radius and especially apted to use in refrigerator cars d trucks.

Circle 57 on Service Card, Page 34

elf-Supporting Stand

For firms in rented buildings, old buildings, or buildings hich have limited dock space, a elf-Supporting Stand is now fered by the Karl A. Herman Co. go with its Herco Dock Boards. he stand simplifies installation, ives greater dock area by putting e loading dock completely out-



ide, and still retains the flexibil- ty and heavy duty features of the oading dock. Installed in front f the present dock, the stand can e welded or lagged into concrete r wood. Since it does not become part of the building, the entire tand and dock can be moved when ecessary.

Circle 58 on Service Card, Page 34

Revolving Crane Truck

Marforge's new Revolving Crane Truck will facilitate handling of molds and other equipment in stor- age and for miscellaneous work in maintenance. It has a capacity of 2,000 lb and an overall height of 68 in. Its hook, which is 60 in. high when raised and 10 in. when

(*Please Turn Page*)

A 25-40 per cent saving of space is reported by closer and higher stacking of sheet steel with this automatic lifter made by Jaeger Machine Co.

Automatic Sheet Lifter Eliminates Ground Handling

Handling unit designed by manufacturer to solve own warehouse problem now available to other industries

WAREHOUSING numerous sizes of sheet and plate and conveying it from warehouse to structural shop became a handling problem for the Jaeger Machine Co., a Columbus, Ohio manufacturer of heavy construction machinery.

They licked the problem by designing their own automatic sheet lifter. Other industries inquiring about the saving in thousands of dollars and the machine's smooth performance, resulted in Jaeger placing it into production for the commercial market.

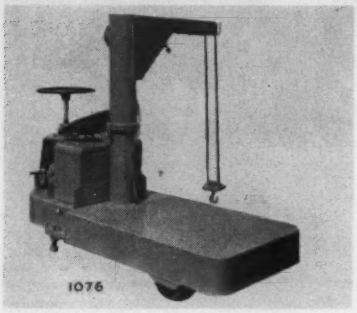
The new lift saves delays as well as the labor cost of men climbing over stacks to pass chain slings or operate lifters by hand. A crane man, with one man below to lay stringers, can handle incoming material from cars or trucks to the stockpile. No men are needed on the ground, however, when transferring from warehouse stockpile to shop.

When the lifter is lowered onto the pack, it opens under its own weight. Rollers glide across the top sheet and guides square up the lifter with the edge of the pack. A hydraulic check valve, controlled from the cab crane, prevents lifter from closing until properly positioned. When the check valve is released, the lifter closes by tong action as it is hoisted. The heavier the load, the tighter the automatic lifter grips the pack.•

Circle 59 on Service Card, Page 34

New Products

(Continued from Preceding Page)



lowered, projects 24 in. over either side of the truck and is raised and lowered by power. Power operation is furnished by a separate pump and motor which pumps fluid into a double-acting ram inside the main mast. A double-acting ram is used so that the hook, whether loaded or empty, will lower at a safe speed and will not depend on gravity.

Circle 60 on Service Card, Page 34

Improved Snow Plow

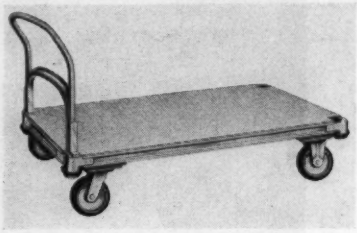
An improved blade unit for snow removal featuring a spring-type counter balance for effortless raising and lowering of the snow blade has been introduced as an

attachment for the Model 15 Prime-Mover. The blade, measuring 50 in. in width, can be set at any angle to either side.

Circle 61 on Service Card, Page 34

All-Magnesium Truck

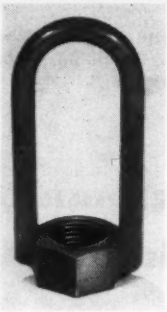
Magline, Inc., announces a new, all-magnesium, 4-wheel platform truck for general materials handling use. The new truck is offered in ten different models, each weighing only ¼ to ⅓ as much as comparable equipment of similar size. The trucks have a capacity rating up to 1,000 lb. Handles are reversible and may be installed at either end of the platform. Special racks or superstructures for multi-purpose truck use may be interchangeable with the handles.



Circle 62 on Service Card, Page 34

Cell Puller

Users of storage batteries will find this new Cell-Puller developed



by Gould-National Batteries useful for examination or repair work. Used in sets of two, the nuts are screwed down over the lead posts, a piece of wood placed in the loops and the cell pulled from the battery by a chain or rope. The same tool is also used with hold-down clips for removing the elements from the jar.

Circle 63 on Service Card, Page 34

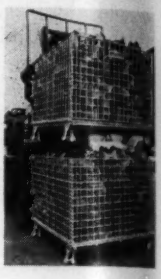
Canvas Cart

A multi-purpose canvas cart manufactured by Parker Sweeper Co. is light-weight, yet sturdy, and folds up like a traveling case for easy carrying. In the 15-bushel size, the cart itself can be used as a light-weight hand truck for transporting drums and large cans. Also, available in five-bushel sizes.

Circle 64 on Service Card, Page 34

Higher Loads

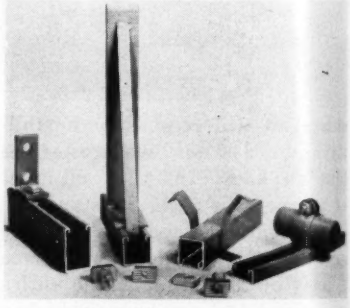
This new Palletainer unit, called the "Hi-Lode," manufactured by Union Steel Products Co., provides extra capacity for bulky materials through elimination from the undercarriage of center legs and leg braces. The "Hi-Lode" folds to one-fifth space when empty to save freight on return trips and is available in 2,000, 4,000 and 6,000 lb capacity.



Circle 65 on Service Card, Page 34

Versatile Framing

"Versabar," a new versatile structural steel framing, manufactured by the M-H Standard Co., is made from cold rolled carbon steel in four basic sizes to provide a broad range of strength adapta-



bility. No welding or drilling required and the only tools required for assembly are a wrench and a hacksaw.

Circle 66 on Service Card, Page 34

For Congested Areas

The "Cargo Scout," a new electric-powered 2,000 lb capacity fork truck designed for fast operation in congested areas, has been introduced by the Elwell-Parker Electric Co. Principle features of the three-wheeled unit include:

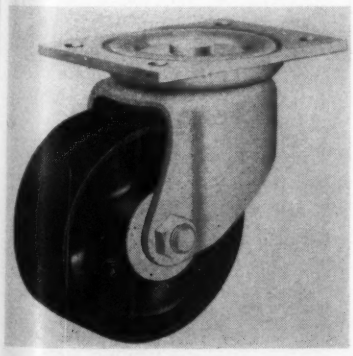
end control for speed and convenience of operators who must get on and off the truck frequently; extra short 42½ in. wheelbase to permit turning in crowded areas; a specially designed device to eliminate steering wheel kick-back.

The truck's Contractor-Control permits fast, smooth starts with one handle controlling four speeds in both directions. The hydraulic lift mechanism features controlled lowering and an automatic unloading device to prevent overloading.

Circle 67 on Service Card, Page 34

Capacity to 1500 lb

Called the "Form-Forged" Caster, this new Bassick Co. product is especially designed to take the punishing loads of powered assembly-line dollies, heavy trucks and similar mobile equipment. Available in 5, 6, 8, and 10 in. sizes, with semi-steel, forged steel or rubber-tread wheels, the new

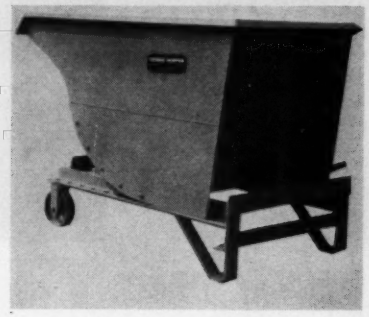


caster has a load rating of up to 1,500 lb. in swivel or rigid types.

Circle 68 on Service Card, Page 34

Cuts Downtime

A Roura Self-Dumping Hopper with a specially designed base that permits moving with either a jack-tongue or a fork-type lift truck is now introduced by Roura



Iron Works. Downtime drops because the machine worker can move the hopper as he needs it, without waiting until a lift truck is free.

Circle 69 on Service Card, Page 34

Banana Truck

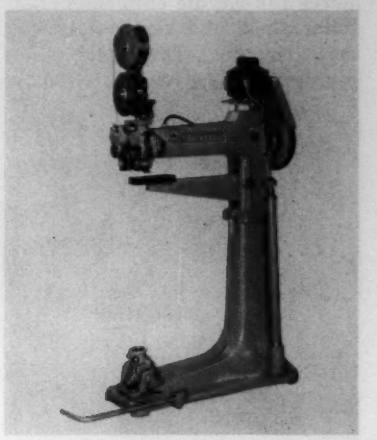
Two bunches of bananas can be safely and quickly handled on this new banana truck introduced by Nutting Truck and Caster Co. The bananas, suspended from hooks on

the top frame, are cradled in heavy double canvas between frame side members. Auxiliary frame and top of main frame provide firm grip for the operator.

Circle 70 on Service Card, Page 34

Two-Staple Drive

A new heavy duty duplex-head box stitcher designed for continuous high speed stapling of large corrugated and solid fibre cartons has been announced by Boxtitch. The machine drives and clinches two staples 2½ in. apart with each stroke and has rated speed of 250 strokes per min. A throat depth of 25 in. makes it

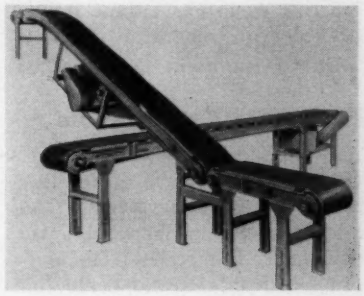


possible to staple containers up to 4 ft wide and the duplex head cuts the required number of strokes in half.

Circle 71 on Service Card, Page 34

Unitized Belt Conveyor

The new Series "L" unitized belt conveyor, manufactured by Conveyor Specialty Co., Inc., is available in standard stock drives, take-



ups, frames, vertical curves and horizontal loading units. A wide range of speeds and belt widths can be readily assembled into a variety of belt conveyor types.

Circle 72 on Service Card, Page 34

Services Large Presses

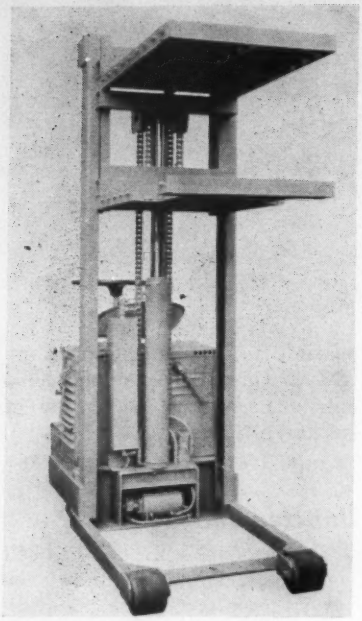
The Loadmobile Tier Lift Truck, manufactured by the Market Forge Co., is specially designed for servicing large presses with dies, jigs, etc. The operator secures a new die from the rack storage and places it on the top roller shelf. At the press he re-

(*Please Turn Page*)

New Products

(Continued from Preceding Page)

moves the old die onto the bottom roller shelf and replaces it with the new die. The machine is equipped with a gas-electric drive

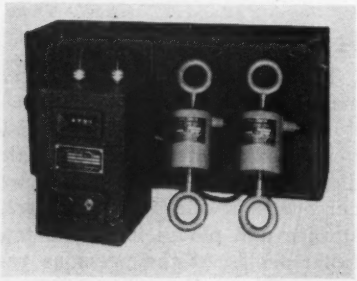


consisting of a small 12 hp, 4 cylinder, 4 cycle gas engine driving a 12 volt DC generator.

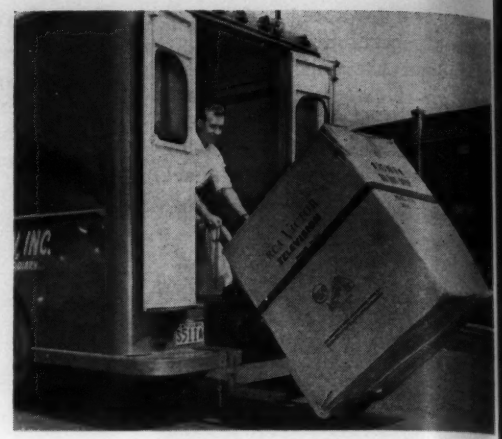
Circle 73 on Service Card, Page 34

Electronic Crane Scale

A fast, simple and accurate method of weighing while transporting has been devised for Monorail and Floor operated cranes by Gilmore Industries. The Model 116 Electronic Crane Scale indicates the weight with direct reading numbers. The scale can be easily mounted on any size monorail or floor operated crane and readily adapted to most materials handling requirements.



Circle 74 on Service Card, Page 34



Combination of folding rear step and hand truck equipped with caterpillar tread make easier delivery of TV sets in this Boyertown body available in ½ to 1½ ton capacity models

One Man Deliveries Easier With MH Combination

Stair-climbing hand truck plus folding rear step against bumper facilitates TV handling

ONE MAN retail delivery of heavy cases and crates has been made easier by a new materials handling combination: A folding truck body step and a special stair-climbing hand truck.

This new development in one man trucking was engineered by Boyertown Auto Body Works, Boyertown, Pa., and a leading television and appliance manufacturer.

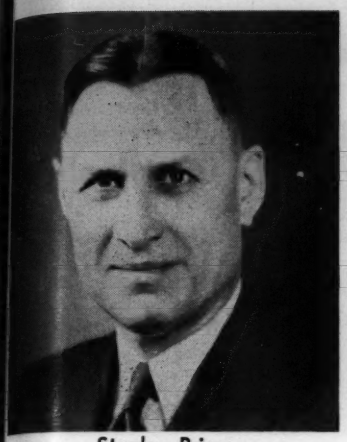
Boyertown has lowered a hinged, folding step from the rear bumper of its standard parcel delivery body. This completes a shallow 3-step rise from the ground to the floor of the truck.

Using a lightweight hand truck equipped with a special caterpillar belt tread, the driver is able to slide the heavy load up or down the steps. The tread rotates about two sets of wheels set 18 inches apart on the underside of the truck to provide the stair-climbing feature.

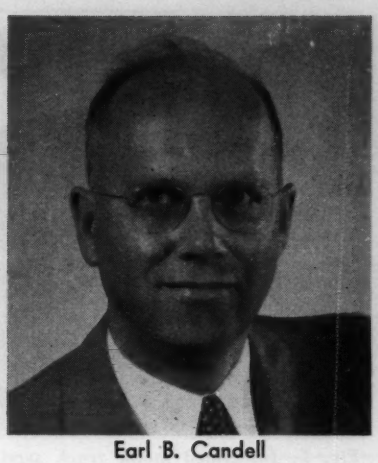
The driver can handle cases and crates weighing up to 650 pounds and measuring 64 inches in height on staircases and steps. It solves the problem of one man pick-up and delivery from homes and stores where no loading platform is available. •

Close-up of hand truck and hinged lower step that folds against bumper

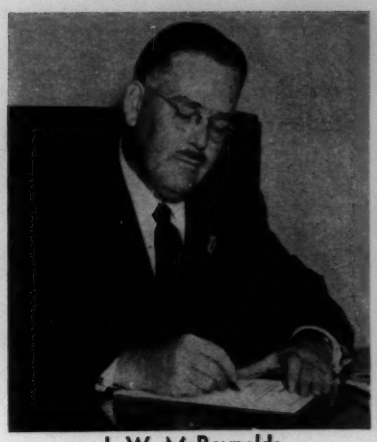
Circle 75 on Service Card, Page 34



Stanley Price
Chairman of the Board



Earl B. Candell
President



J. W. McReynolds
Executive Vice President

L. S. Beale
Vice President

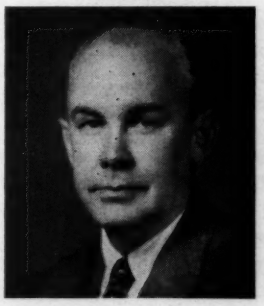
SIPMHE Presents Annual Triple Feature Event

Packaging competition, technical short course and exposition attract record crowd in Boston

A. C. McGeath
Vice President

E. P. Troeger
Vice President

M. A. Grogel
Treasurer



John Mount
Secretary

THE 1953 triple feature—exposition, competition and technical short course—presented in Boston late last month by the Society of Industrial Packaging and Materials Handling Engineers, was one of the most successful in the eight-time history of the show.

New Officers

New national officers announced at the show include: Stanley Price, Western Electric Co., chairman of the board; Earl B. Candell, General Electric Co., president; J. W. McReynolds, Kraft Foods Co., executive vice president.

Also, L. S. Beale, Wirebound Box Mfg. Assoc.; A. C. McGeath, American Box Board Co., and E. P. Troeger, Douglas Aircraft Co., vice presidents; M. A. Grogel, Ekco Products Co., treasurer, and John Mount, Insurance Co. of North America, secretary.

The Technical Short Course, for the first time since its inception, was divided into two sections. One section was devoted to "Fundamentals of Packaging,"

(*Please Turn to Page* 57)

Where LCL Goes—Bulk Traffic Follows

The question often asked—"Do railroads want to handle lcl traffic," is academic. It has been proved that when lcl traffic moves to other forms of transportation, carload traffic, from the same shipper, follows.—*J. L. Webb*

Fig. 1: Integrated motor truck service helps the PRR speed its lcl freight service in zone station cities—covers 83.3 per cent of the road's mileage

By **J. L. Webb**, *Mgr., Stations & Motor Service*
Pennsylvania Railroad, Philadelphia, Pa.

Railroad LCL Dilemma

Substitute Service A

Unless railroads desire to become bulk handling carriers only,

PRESENT uncertainty in the minds of railroad officers as to the value of less than carload traffic is reflected, in part, in the service accorded. This is turn raises a doubt, in the minds of patrons, of the railroads' desire to handle the traffic. It also leads to unopposed and even suggested diversions to other forms of transportation.

The uncertainty is largely one of economics. If lcl traffic does not, and cannot, be made to pay its way, it is proper that we must consider ways and means to avoid the burden thereby placed on paying traffic.

Unless the railroads desire to eventually become bulk handling carriers only, and lose their present status of general carriage, the economics of lcl handling must be established. The present negative thinking must be turned into affirmative thinking. A satisfactory service must be established that will hold the traffic.

The Economics

From the viewpoint of economics, there are two-general breakdowns or division of expenses involved in lcl handling. One is "direct" expense, which is that incident that can be accurately determined. It includes station handling, both platform and clerical, loss and damage to freight, pick-up and delivery service, allowance to patrons, and auxiliary and supplementary coordinated motor service, line-haul and intra-terminal.

The other "indirect" expense factor includes maintenance of way and structures, maintenance of equipment, general transportation and general overhead.

When direct expenses are subtracted from revenue there is usually a sizeable remainder. Some consider this the value of lcl traffic to a railroad. Generally speaking, it is the amount that would have to be borne by other traffic if lcl disappeared.

Others consider that when calculating the expense, a percentage of the indirect or general expense of the railroad should be added to the direct expense before the deduction is made from revenue. The balance is said to show the value of the traffic.

There is no practical formula to determine the percent of the indirect expenses that should be included in the latter calculation.

A percentage of indirect or general expense, based on car miles or gross ton miles, when added to the direct expense, will show

Editor's Note: Mr. Webb's paper was presented at the Pan American Railway Congress, June 12-25, in Washington, D. C., and Atlantic City, N. J.

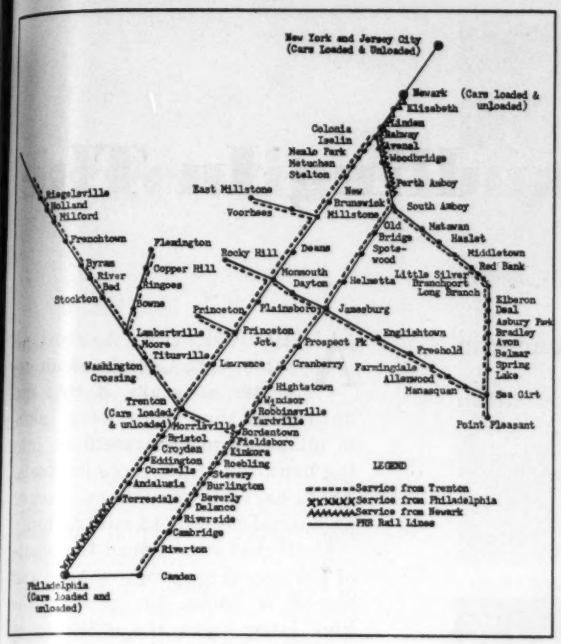


Fig. 2 (left): Substitute service map between New York and Phila., with stations at Phila., Newark and Trenton

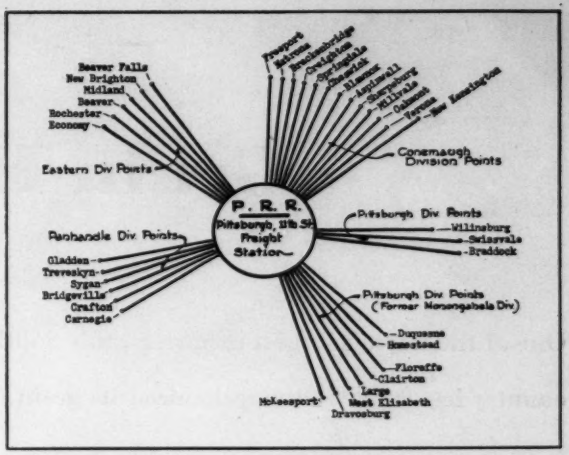


Fig. 3 (above): Extended substitute service to larger communities in big-city areas permits door-to-door service

A Partial Solution

only, they must establish a practical LCL philosophy

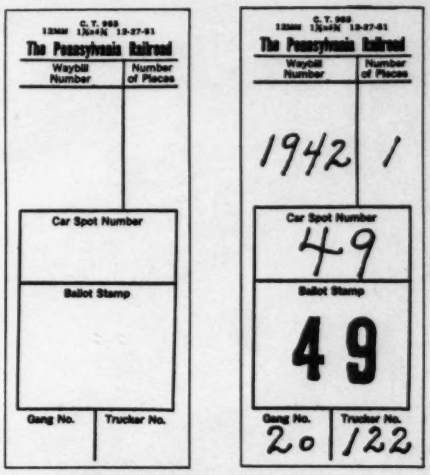


Fig. 4: Simple ballot insures that handlers put freight in proper car, expedites tracing

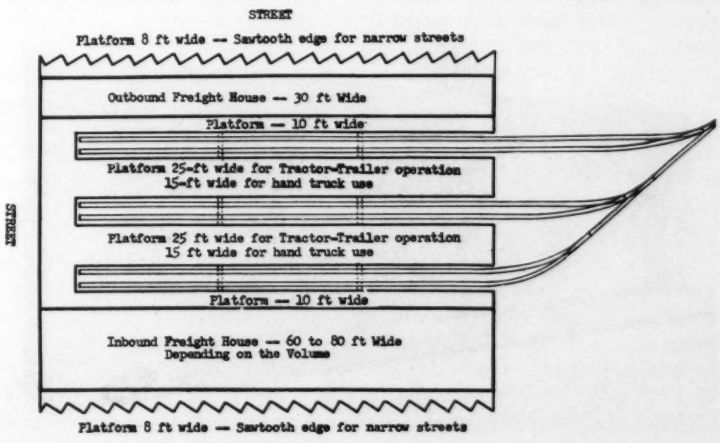
either a balance or a very small deficit when subtracted from revenue. This leaves the inescapable conclusion in the minds of the layman that, from an economic viewpoint, there is value to the railroads in lcl traffic.

In making any calculations, there are two factors, frequently overlooked:

1. All of the revenue must be considered, including that covering lcl shipments weighing 10,000-lbs., or over, which, under ICC Accounting Procedures, is normally included with the revenue on carload traffic.

(*Please Turn to Page* 62)

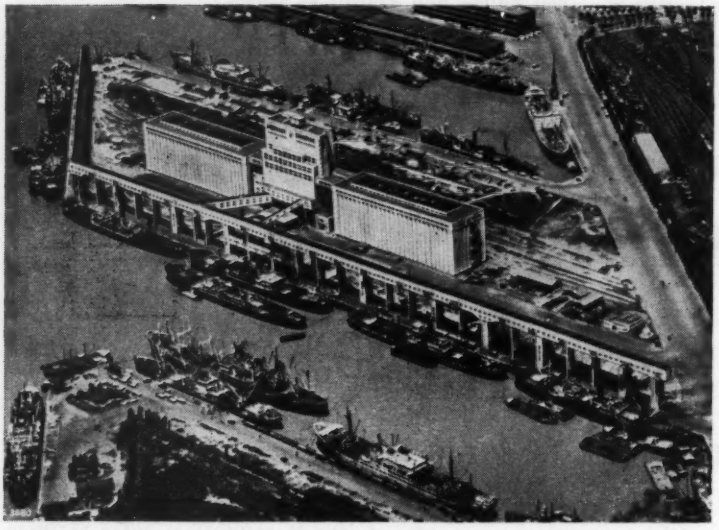
Fig. 5: Sketch shows platforms, tracks, cross-overs, etc. of a station designed to facilitate moving of lcl traffic by use of handling equipment



Grain Handling In The A

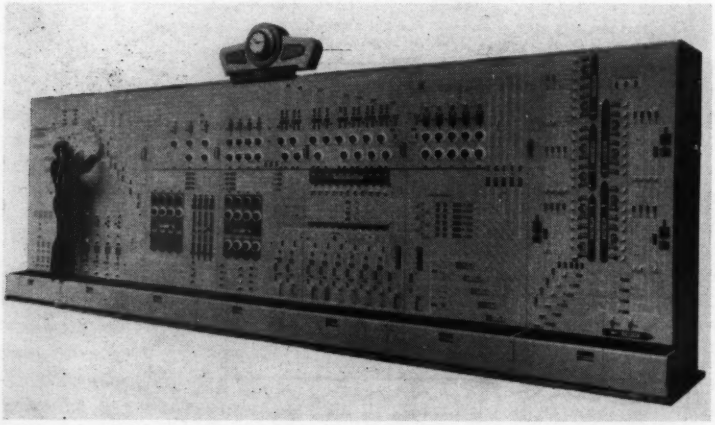
One of the world's largest exporters, this South American country has completely mechanized its grain distribution

By John Grinrod



South America's largest grain elevator, in Buenos Aires, has a capacity of 150,000 ton—stores, processes and ships 1½ million ton each year

This elaborate new grain signalling and control panel makes it possible to trace and identify any individual wagon-load at any stage of its journey



ALTHOUGH the Argentine ranks with Canada as an exporter of grain, it was not until 1928 that steps were taken to introduce modern methods into the handling of her huge harvests. These harvests sometimes reached an annual total of 18 million ton.

Until that year almost the whole of her cereal crops was moved and stored in sacks, in spite of the high labor costs, the difficulty of satisfactory grading, and the congestion caused in railways and at ports through lack of adequate handling facilities.

Government Inquiry

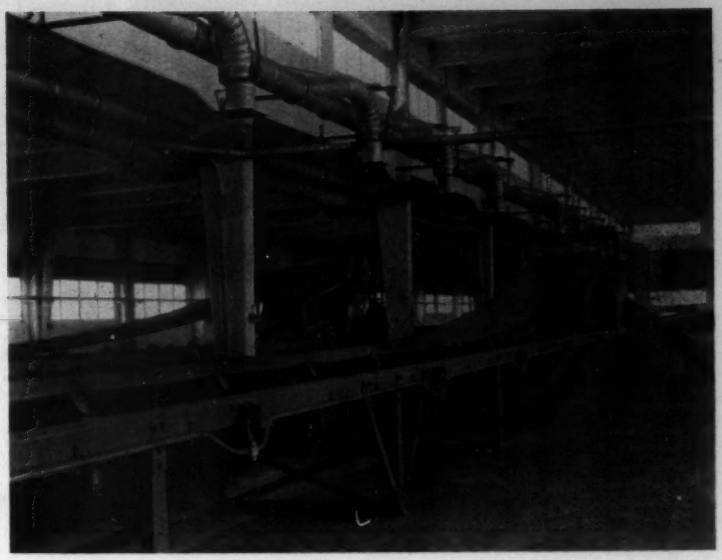
As a result of an inquiry by a Government Commission set up in 1928, followed by a technical report on the situation, submitted by a British engineering firm at the Government's request, a national development scheme was authorized by the Argentine Congress in 1933.

This aimed at a system of country and terminal elevators throughout the 200 million-acre grain producing region. The area includes the provinces of Buenos Aires, Santa Fe, Cordoba, Entre Rios and the central Pampas Territory.

This policy was set in motion just before World War II. The most recent development has been the inauguration, a few months ago, of a giant elevator at Buenos Aires. The new elevator is the largest and most modern in the southern hemisphere. Eventual completion of the program is expected to revolutionize the Argentine grain trade and will give great commercial advantages in the distribution of the country's grain harvests.

The full scheme includes construction of 14 terminal elevators at river and coastal ports and of

Argentine



This long distribution conveyor includes a self-propelling, traveling, throw-off carriage over main storage bins. Note dust exhaust units

more than 300 smaller collecting elevator - warehouses scattered throughout the cereal region.

Elevator Capacity

With the placing of five contracts for terminal elevators, the plan was initiated in 1938. These covered the building and equipping of large handling plants at Rosario Sud, 75,000 ton; Rosario Norte, 50,000 ton; Villa Constitpcion, 54,000 ton; Quequen, 48,000 ton, and Buenos Aires, 150,000 ton.

In addition, an 80,000-ton elevator already built and equipped at Ingeniero White for the Buenos Aires Great Southern Railway was to be enlarged to 140,000-ton capacity.

In spite of wartime difficulties, these four contracts were completed by 1945. The Rosario Norte project was abandoned and, because of the war, the execution of the Buenos Aires contract, which had been placed with a European firm, was prevented.

The building for the latter had, in the meantime been erected, and at the close of the war, tenders were again called for the installation of mechanical and electrical equipment.

This contract, exceeding 2 million, is the most valuable and important granary contract ever placed by one country with another.

With its storage capacity of 150,000 ton, the new elevator is capable of receiving, storing and shipping 1½ million ton of grain a year. In addition to the actual handling machinery, the plant incorporates comprehensive grain cleaning and drying equipment and dust collecting installations.

Altogether there are 65 conveyors, with a total length of about five miles; 20 elevators, of which the highest are 260 ft between head and boot pulley centers; and some 250 electric motors giving an aggregate of 7,500 hp.

Rail Receipt

Most of the grain is received by rail and will ultimately come from the smaller collecting centers throughout the district.

For this reason, most of the intake equipment is for the discharge of rail wagons, which can be unloaded at the rate of 2,000 ton an hour by four intake lines of conveyors, elevators, dormant hopper scales and distribution conveyors.

Each of the four intake lines has a capacity of 500 ton an hour. For bulk wagon discharge 32 power shovels are provided.

Some quantities of grain will be received by road trucks. For their discharge there is a similar intake line with a capacity of 250 ton an hour. Waterborne grain is unloaded by two traveling pneumatic intake plants on the dockside, each having 70-ton an hour capacity.

The working house in the center of the building houses the cleaning plant. This comprises warehouse separators, oat clippers and disc separators. Cleaning capacity is 3,700 ton of grain a day.

When the grain has passed through the main clearing plant, screenings often require special attention. There also are a variety of machines for re-treating.

The drying plant includes three grain dryers with a daily capacity of 440 ton.

As most of the grain from the elevator will go overseas, the main relivery outlets consist of six shipping lines of conveyors, elevators and dormant-hopper scales with a total capacity of 3,600 ton an hour.

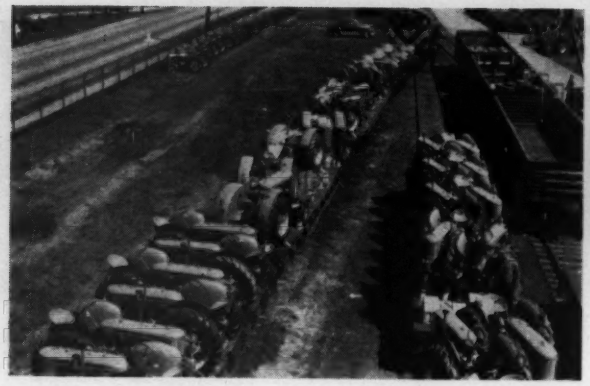
Five ocean-going vessels can be berthed and loaded simultaneously by means of 27 telescopic loading-out spouts at the shipping gallery, which is more than half-a-mile in length. Grain can also be sacked and loaded out to ships for topping off bulk cargoes.

The delivery equipment also includes conveyor lines for loading out grain, either in bulk or sacks, to rail wagons and road trucks.

Dust Collection

Dust is drawn off at every throw-off point in the handling process and the comprehensive dust-collecting system consists of 14 separate plants. The dust is

(*Please Turn to Page* 57)



Photographs illustrate various types of farm implements loaded on flat cars. In most cases the long, wide cars had to be specially designed for the trade. Diversion of flat cars for Piggy Back service is threat to the industry.

Piggy Back Service Robs Peter to Pay Paul?

Author claims rail stock is being diverted from normal channels to trailer-on-flat-car scheme, adding to the serious car shortage, in serving a source of doubtful revenue value to the railroads

CONSIDERABLE attention has been given in recent months to the rail-highway cooperation plan involving the transportation of highway trailers on flat cars.

While it is possible that the "Piggy Back" scheme is not without merit, there are several important reasons why it should not be attempted at this time on a nation-wide scale.

Rate Discrimination

There is a strong feeling here that the plan is a definite form of rate discrimination against certain other long-time users of railway flat car service.

In addition, it has been proved that flat cars, of which there is a serious shortage in service to several industries, are being diverted from the trade for which they were originally intended to meet demands of the Piggy Back plan.

In the March, 1953, issue of DISTRIBUTION AGE, Arthur C. Roy, general traffic manager, Pennsylvania Glass Sand Corp., treats the subject in an article entitled, "How the Railroads Can Attract LCL Traffic."

Roy makes an important statement to the effect that railroads can increase their revenues by applying flat cars to transportation of loaded motor carrier trailers, such application to be made on what is referred to as "practically overnight rail hauls."

On the basis of the author's figures, railroad revenue from trailer-on-flat-car service, as against railroad revenue from other types of flat car service, represents discrimination against those purchasing flat car service for normal use.

Revenue Differences

For transporting a loaded highway trailer up to 35,000 lb between Boston and New York, the railroad receives $58.24. For hauling agicultual implements of the same weight between the same two points, the railroad receives $296.42.

A similar difference exists between Chicago and St. Louis, where the rate for 33,000 lb is $35 compared to $168.09. For a 20,000-lb load between Chicago and St. Paul, the ratio is $67.75 to $230.22.

The author of the March DA article points out that a considerable number of flat cars are already in service hauling highway trailers. He claims that additional service could be developed to the point of adding second-morning service instead of single overnight service.

Under this plan, Pittsburgh, Pa., for example, could be served for destinations such as New York, Baltimore, Chicago, Cincinnati, St. Louis, Detroit and Buffalo. Roy also suggests that the service could be extended to in-

By A. F. Bowman
Traffic Manager
J. I. Case Co., Racine, Wis.

clude St. Paul, Kansas City, Milwaukee, Boston, Norfolk and similar cities.

Western railroads are the largest owners and operators of flat cars in the country. It is apparent that many of the cars now used in trailer-on-flat-car service are not owned by the railroads providing the service.

Car Diversion

It has been reported that the NYNH&H Railway used 34,000 flat cars for hauling highway trailers last year. Since this particular railroad does not own more than 150 cars suitable for the service, it is obvious that a great deal of Western railway equipment is being tied up in the operation.

Railway flat car service is the chief method of transportation in our industry—agricultural implements. Since the cars must be long and wide in construction, most of them were specifically designed to meet industry demands.

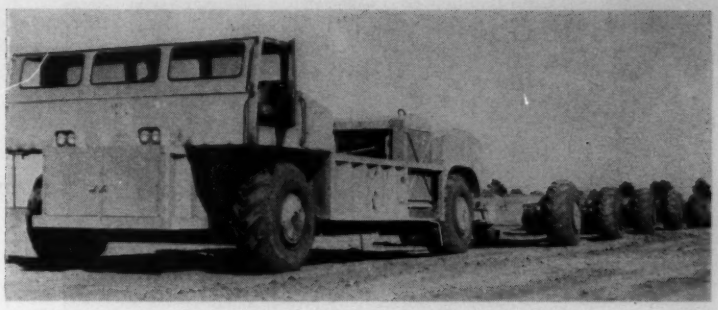
The same type cars are needed for trailer carriage. The fact that there are not enough cars available to handle products of the agricultural implement trade is a serious threat to the industry.

The shortage of cars is attributed to a number of things. Diversion for Piggy Back service at this time, however, seems inexcusable.

Before the railroads pay further attention to hauling competitor's freight, for much less revenue, they should meet the demands of their own long-time trade, using the equipment in service for which it was intended.

Unless the condition is corrected, and unless additional flat cars are provided to serve trades for which their special design is needed, it seems obvious that there will be increasing diversion of these shipments to other forms of transportation.•

Editor's Note: Mr. Bowman's remarks are excerpted from two letters written by him in response to Mr. Roy's article and other Piggy Back publicity, and mailed to executives of five Western railways and several associations.



Tournatrain, consisting of eight 20-ton capacity freight cars, climbs grades steeper than an automobile and each car propels itself with "electric wheel"

Rubber Tired Railroad New Type of Cargo Carrier

Each freight car pulls itself by "electric wheel," locomotive supplying electricity and leading train

TOURNATRAIN, a new mode of transportation, developed by R. G. LeTourneau, equipment inventor, may well become the trail blazer for hauling cargo in undeveloped areas, across deserts and boggy terrain.

The heart of the Tournatrain is his "electric wheel," which carries a large pneumatic tire and has within its rim an electric motor and gear reduction. Every wheel is a rubber tired, self-propelled electric unit, each deriving its energy from the locomotive which mounts diesel engine driven electric generators.

The engineer, from his cab on the locomotive, applies power at will to all wheels of the train, thus each car is provided with propulsion for its own load.

There are no brake shoes to wear out because the same electricity that drives the wheel can be used to hold it back going down hill. Only an automatic emergency brake is provided.

Each car follows in the same tracks as the preceding car. By a simple automatic steering device the path of the locomotive is duplicated in its turn by each car of the train. •

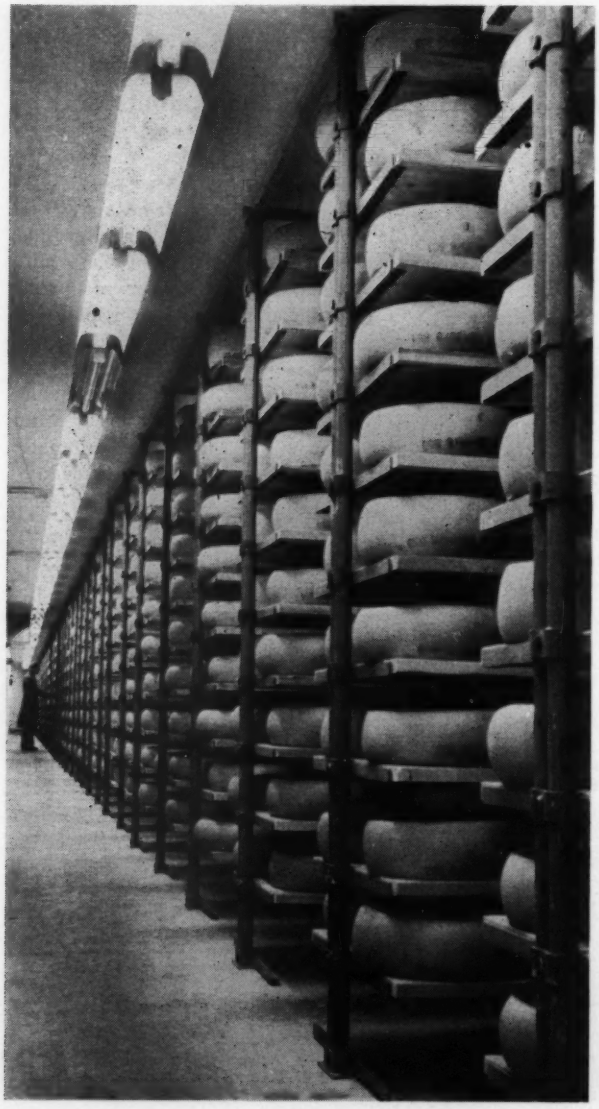
Circle 76 on Service Card, Page 34

Each self-propelling electric wheel derives energy from locomotive equipped with diesel driven electric generators; center motor provides auxiliary steer

Automatic handling system, room for cold

Swedish Co-op Builds New Cheese

Scaffolding-type shelving is mounted on movable brackets so that the distance between shelves can easily be altered



CLAIMED to be the largest in Europe and the most modern of its kind in the world, a new cheese warehouse and distribution center was recently completed at Jönköping, Central Sweden.

Belonging to Riksost, joint marketing organization of the Swedish dairies, it covers 2,000 square meters of land and has a total capacity of about 800 ton. It can accommodate 1,200 ton if cold storage is adopted in basement store rooms.

Construction Details

The building consists of two main sections. Giving immediate access to the main road, the front section is of brick construction and has three floor levels. On the ground level are the shipping and receiving bays at which six vehicles can be dealt with simultaneously.

On this floor also there is a distribution store with a capacity of 60 ton, and a general office. On the first floor there is an office, a changing room with employe facilities and a dwelling.

The basement story houses two refrigeration machines for serving the distribution store, boiler room, electricity control room, shelter, stockroom, etc. Total refrigerator capacity is 13,000 kcal/h.

Behind the front part are the store rooms proper, built of concrete, and having ground floor, basement and loft. The basement and ground floor are identical. Both are divided into two cells, each 58 meters long and having a room for the paraffin-wax treatment of the cheeses.

The warehouse consists of four cells in all, each of which will take 15,000 cheeses, or about 185 ton, at normal storage. A temperature of between 8 and 15 deg C is maintained.

Keeping cheese in cold storage has, however, been tried out on an increasing scale in Sweden in recent years. Among the advantages this method offers is a more effective use of available space.

Facilities for cold-storage have been provided at the new depot at Jönköping and, when

storage expansion included

Warehouse

necessary, the basement cells can be maintained at a temperature of between 0 and —5 deg C. Used in this way the basement is adapted so that it can take a greater number of cheeses.

Providing the refrigeration are six machines installed in the loft. Using ammonia as a cold medium, their total capacity is 144,000 kcal/h. Including the refrigerators for the distribution store the total cooling capacity of the building is 157,000 kcal/h.

The plant also is air-conditioned. Eight air-conditioning units with a capacity of 90,400 cubic meters of air per hour also are installed in the loft.

Automatic Handling

Cheese handling is almost entirely automatic and mechanical. On arrival at the reception bays, cheeses are automatically weighed by scales provided with a calculating mechanism, which is fixed up in direct connection with the conveyor.

Following this they are transported by stainless steel conveyor belts to a machine in which they are soaked in paraffin wax at the rate of 500 per hour. Moving the cheeses from one floor to another is carried out by chain delivery.

The normal storage time at the plant is four months. The turning of the cheeses which has to be done twice a week, is the only process done by hand at the Riksost plant.•

Traveling 160 fpm and carrying 1,500 lb a minute, this nylon belting in one year transported 40,000 ton of fertilizer to bagging machine

Nylon Conveyor Belt Eliminates Down-Time

Rubber-covered belting in fertilizer plant resists corrosion, cuts maintenance costs

By Michael M. Gutwillig
DA Canadian Correspondent

IN ITS first Canadian try-out in another league of industrial application, nylon has scored an impressive debut. A nylon conveyor belt is outdistancing its fabric counterpart in a fertilizer plant where acid corrosion formerly caused considerable down-time.

In March, 1951, a conveyor belt made from nylon fabric and covered with rubber was placed in service conveying compound fertilizer from a small storage hopper to a bagging machine at the plant of Canadian Industries Limited, Chatham, Ont.

The belt is still in service. After a full year's operation, it had conveyed over 40,000 ton of fertilizer to bagging machine—double the quantity any other fabric belt previously used.

The experimental belt is 22 ft, 5 in. long, and 12 in. wide. It operates in normal atmospheric temperature inside an unheated wood building on a continuous hopper feed, without shock, but under constant load. The belt moved 160 fpm and carried 1500 lb a minute.

Acid corrosion of belt fabric is a serious problem, particularly in the summer months, when humidity is high. The tests being conducted at the Chatham plant indicate that even when the surface rubber on the experimental nylon belt is completely worn away, it continues giving satisfactory service for some time before the belt fabric starts to deteriorate.•

Is Your Safe Safe?

Needless risk of cash and other valuables is unnecessary—your office safe may be a soft touch for some clever yegg, unless you take a few simple precautions to discourage him

By Harold Ziegler

A GOOD safe, properly used, can be just what the name implies, a safe depository for your cash and valuables. But even a good safe improperly used may prove a push-over for an experienced safe cracker.

There are a number of devices, precautions and tricks which can be employed by alert business people in their never ending battle to outwit the underworld.

The Combination

A safe expert, E. J. Goodenough, representative of a Hamilton, Ohio safe company, advises business men to refrain from making their safe combinations too obvious. He stated that alert safe crackers check on important dates such as birthdays, which are often used by safe owners as easily remembered combinations. If a safe owner was born Dec. 19, 1888, it is obvious that it wouldn't be wise to use a combination such as 12-19-18, or 12-19-88.

When valuables are not kept in a safe, paste the combination on the safe where it can be seen by would-be yeggs. This will save a repair bill by preventing some safe crackers from knocking off the combination, blowing the door off, or ripping it apart.

A small light should be kept directly above the safe from dark to dawn, no matter where the safe is located. Safe crackers cannot work on a safe in a light where they can be seen.

To the average on-the-job safe cracker, every creak or sound is a potential atomic bomb—and every light may be wired to take his picture or to signal for the police. A small light of any kind will make a yegg very, very nervous.

Since it would be stupid and dangerous for a safe cracker to turn on the lights while he is working on a safe, it is equally as stupid and dangerous for him to turn off a light. This action would immediately attract the attention of the policeman on the beat or the attention of alert people in the neighborhood who have become accustomed to seeing a light in the establishment night after night.

Notify local police when you have decided to have a certain light on each night. They will look for the light on their regular rounds and, if it is off, they'll investigate.

Tie It Down

If possible, bed your safe in concrete or have it bolted to the floor. Also have the casters removed from your safe so that yeggs cannot roll it to an exit, easily load it on a truck, and then open it at their leisure in some secluded spot.

Hundreds of safes are cracked each year by yeggs who simply roll them into sound-proof ice boxes, elevator shafts and basements where sounds are muffled. Removing the casters will make this procedure more difficult and often discourages safe crackers completely.

There are many modern protection devices and safes on the market now that give the safe crackers and holdup men a hard time, such as tear gas systems that explode when a safe is opened in the wrong way or slotted safes with time recording devices.

Key to Safety

Safes that cannot be opened without two keys, both of which are never on the premises at the same time, except when the armed guards make their appearance to carry away the contents, are effective.

There are other types of alarms that can be attached to safes, such as adding 10 digits to the regular combination, photo-electric cells, infra-red lights, air-pressure alarms and other protection devices that were perfected during World War II and which are now being adapted to business establishments by firms and individual experts in public protection methods.

By employing one or more of the precautions above, you won't make friends in the great fraternity of yeggs and safe crackers, but you will add years to the life of your safe, and perhaps avert economic disaster. •

Thermic Borer Pierces Walls In 90-Second Operation

9-in. walls melt under temperature of 1400 deg. Centigrade and proves new boon in saving construction time and materials

WHEN iron at red heat is introduced to pure oxygen, it will continue to burn and give off heat. This theory was used in developing a new thermic borer which will go through a 9-in. wall in 90 seconds.

R. Eckersley, district manager, and William Watts, foreman, Birmingham district of the Midlands Electricity Board, England, developed the new borer.

The borer has an iron tube tightly packed with iron wire of about 0.125 in. gauge, one end being connected to a controlled oxygen supply and the other pre-heated to red heat with an acetylene flame. Oxygen is then applied via the iron tube, causing the end of the tube—or lance—to fuse.

The lance is then applied to the concrete or brickwork and the temperature attained is so great—up to 1,400 deg C—that the stone or brick is melted.

Tests have shown there is no vibration to cause possible damage to the wall or to tire the operator. There is less strain on the operator than in lifting an ordinary drill.

Now in commercial use, the thermic borer has shown its advantages in awkward positions and with very difficult material. The borer will be most effective to the warehousemen desiring to modernize or build a new plant. It will cut through partitions, metal doors and walls without affecting the surrounding material.

All types of distribution systems can utilize a thermic borer when conveyors or chutes are to be installed through walls. The additional saving in construction time and materials has proved the borer to be an industrial asset.•

Above: borer begins to melt 9-in. brick wall at 1400 deg Centigrade

End of borer is pre-heated with acetylene flame, pure oxygen flowing through the iron tube causes it to fuse and develop a temperature that will melt walls

Below: intense heat has localized hole without affecting entire wall

Chuting the News

(Continued from Page 13)

NFWA Engineering & Controllers Conference

A view of the over 155 delegates who attended the National Furniture Warehousemen's Engineering and Operation Conference, Sept. 30-Oct. 1, Museum of Science & Industry, Chicago, Ill., and the Controllers Conference, Oct. 2-3, International House, University of Chicago. Exec. Secretary, Edward D. Byrnes sits in the foreground first row, Pres. Austin H. Hathaway, sits opposite projector on first row, and back to camera is Marion W. Niedringhaus, Pres., General Van & Storage Co., Inc., St. Louis, Mo., who discussed his Pallet Vault method

Furniture warehousemen received with enthusiasm the NFWA's Engineering and Controllers Conference, Sept. 30-Oct. 3, in Chicago, Ill. Included in the program's first session were the following: "Plant Construction," by Herbert B. Holt, Bekins Van & Storage, Los Angeles, Cal.; "Safety Engineering," by Jac M. Lovell, Safety Management Co., New York, N. Y.; "Unit Time Studies of Warehouse Operations," by Edward D. Byrnes, Exec. Secretary, NFWA, and "Palletization of Household Goods," by Marion W. Niedringhaus, General Van & Storage Co., Inc., St. Louis, Mo.

A panel on Packing and Crating was under the chairmanship of Joseph A. Hollander, Jr., Hollander Storage & Moving Co., Inc., Chicago, Ill.; Merchandise Packing headed by Ben Bernstein, Quaker Storage Co., Philadelphia, Pa.; Household Goods Packing led by Martin Santini, Santini Bros., Inc., New York, N. Y., and Special Engineered Packing directed by NFWA president, Austin H. Hathaway, Lyons Van & Storage Co., Los Angeles, Cal.

Oliver Wogstad, Judson Freight Forwarding Co., Chicago, Ill., and Robert E. Lee Harmon, Freight Loss and Damage Prevention Section, AAR, discussed "Claims Prevention Programs." John K. Gund, Lakewood Storage, Inc., Cleveland, Ohio, was chairman of the Local Moving Panel.

George Winkler, Jr., John Winkler's Sons, Inc., Far Rockaway, N. Y., was chairman of the Controllers Conference held at the International House, University of Chicago, Oct. 2-3. "Business Profits — Some Pros and Cons — Some Do's and Don't" was the subject of a talk by C. B. Taylor, C. B. Taylor & Associates, Toronto, Ont. C. F. Basil Tippet, Tippet-Richardson, Ltd., Toronto, Ont., discussed "Advanced Business Control Through Ratios."

"Accelerated Depreciation" was covered by Edward B. Wilcox, Edward Gore & Co., Chicago, Ill., at the afternoon session. "The Economics of Industrial Real Estate" was discussed by James C. Downs, Jr., Real Estate Research Corp., Chicago, Ill.

V. E. Noel addressed the Saturday morning session, Oct. 3, and presented a film on the topic of "Modern Federal Tax Law Reporting."

Fleet Owner Conference

A one-day top management conference for motor fleet executives and owners conducted by The Pennsylvania State College will convene Nov. 9, at Spring Garden Institute, 2815 North 17th St., Philadelphia, Pa. The seminar, meeting from 9:30 a.m. to 4:00 p.m., will discuss methods of obtaining trained employees and of providing in-service training. The meeting is primarily for fleet owners and presidents, however, vice-presidents and other executives may attend also if they are in charge of selecting and training personnel.

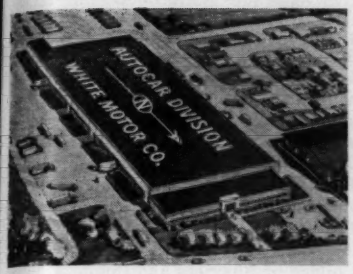
The registration fee for the Top Management Conference is $15.00 and all-inclusive. Address your applications to: Amos E. Neyhart, Institute of Public Safety, The Pennsylvania State College, State College, Pa.

—DA—

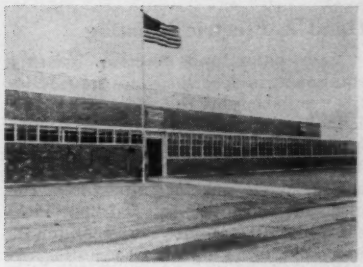
E. G. Plowman, vice president in charge of traffic for the United States Steel Corp., was elected president of the National Defense Transportation Association.

Leaders in the trucking industry in the Middle West joined hands with officials of Trailmobile Inc., in breaking ground for new $350,000 factory branch sales and service and west central sales division headquarters of Trailmobile in Omaha, Neb., recently. Left to right, Paul Halpine, secretary, Nebraska Motor Carriers' Assn.; A. K. Longacre, treasurer, Union Transfer Co.; W. A. Burns, president, Trailmobile Inc.; and G. H. Johnson, president, Independent Truckers, Inc., and president, Nebraska Motor Carriers

Industry Items



Construction begins shortly in suburban Exton, Pa., on new plant for recently acquired Autocar Division of White Motor Co. The investment program will total $2 million and provide 130,000 sq ft of manufacturing facilities on one floor



Entrance and offices of the new $1½ million plant of the Signode Steel Strapping Co. at Weirton, W. Va., celebrating company's 40th anniversary. Fully automatic equipment is increasing production in this 170-ft by 440-ft plant

A new steel warehouse will be opened by *Jones & Laughlin Steel Corp.* in Louisville, Ky., this month.

Shipping Utilities, St. Louis, incorporated July 1, 1953, according to a recent announcement by President J. G. Buettner.

United States Rubber Co. is planning to open a new distributing branch office and warehouse for its U. S. Royal tires in Jacksonville, Fla., shortly after Jan. 1.

Pan American World Airways will introduce 300-mile-an-hour Super-6 Clipper service between the United States and Alaska early in 1954 which will cut flight time between Seattle and Alaska's major cities by 25 per cent.

A two-year expansion and improvement program is nearing completion at *Westinghouse Electric's* mica plant at Irwin, Pa. Highlighting the expanded facilities is the addition of a new two-story building.

Additional overnight all-cargo service between Chicago and San Francisco-Oakland, providing delivery at the opening of the business day, has been placed in effect by *United Air Lines*.

Wilson Freight Forwarding Co., Cincinnati, Ohio, held its annual meeting for terminal manager and salesmen in Bedford, Pa., Sept. 26-27.

Randolph Metal Products Co., Chicago, Ill., has announced the appointment of Don W. Kelsey, Detroit, Mich., as distributor for the new RanGuard All Steel Corner Pallet Guard in addition to the company's new line of Rantote 877 tote boxes.

A new financing service for sale and lease of industrial lift trucks has been announced by *Yale & Towne Mfg. Co.* This service has been instituted through a wholly owned subsidiary, The MHE Corp., and is available to customers of Yale's Materials Handling Div. in Philadelphia and the Automatic Transportation Co. in Chicago.

Johnson Motor Lines, Inc., has placed into use a Mobile Safety & Personnel Clinic completely equipped with instruments to provide for examination of all employees. This unit started in service at the Charlotte general office and terminal Aug. 10 and will rotate between Johnson's 19 terminals.

Air foam fire extinguishing systems, manufactured by the Pyrene Mfg. Co., Newark, N. J., are now offered for sale and installation through the nationwide organization of the *Grinnell Co., Inc.*, Providence, R. I.

Palmer Shile Co., Detroit manufacturer of materials handling equipment, recently completed construction of this 15,000-sq ft addition, the company's third expansion within the last three years

Magline Inc. has announced the formation of a Canadian corporation to manufacture and distribute its principal products. The company, to be known as *Magline of Canada, Ltd.*, with headquarters at Renfrew, Ontario, will produce the full line of Magliner magnesium products.

The *Baker-Raulang Co.*, Cleveland, Ohio, has announced appointment of the following companies as representatives for Baker industrial trucks and cranes: Hohl Industrial Sales Co., Buffalo, N. Y.; Baker-Lull Associates, Philadelphia, Pa.; A. & W. Engineering Co., Miami, Fla.; Industrial Truck Sales, Inc., Lathan, N. Y.

Men in the News

(Continued from Page 13)

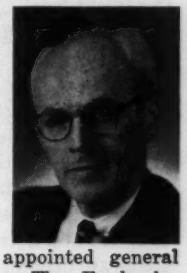
W. T. Blackburn — appointed manager, Corrugated Div., General Box Co. He will have complete charge of all sales and production of corrugated containers for the firm.

William H. Nenstiel — appointed West Coast sales representative, Robert Gair Co.

Traffic

Carl P. Greeley —named director of traffic of National Distillers Products Corp. He assumes the post formerly held by the late **Charles W. Braden.**

W. B. Richards — appointed traffic manager, Parsons Ammonia Co., Inc., succeeding **Charles H. Webb,** who retired Oct. 1.



John D. Mitchell — appointed traffic manager, and **R. William Cooper** and **Joseph L. Bula** were named assistant traffic managers in the Corning Glass Works Traffic Dept.

James Sloss — appointed general traffic manager for The Englander Co., bedding manufacturer.

David E. Clark — appoined traffic manager of the Bohn Aluminum and Brass Corp.

H. H. Marsales—named eastern division general traffic manager of Colorado Fuel & Iron Corp., with his headquarters at the Buffalo, N. Y., plant.

Max G. Rein—new traffic manager of Durex Plastics & Chemicals, Inc.

Earl L. Cranston—appointed general traffic manager of the Los Angeles Soup and the White King Soap Companies. He succeeds **J. C. O'Leary** who is retiring.

Warren R. Ross — appointed new traffic manager of the Geigy Company, Inc.

Harold Wright—named traffic manager of Spencer Kellogg & Sons, Inc.

Orrin Fraley—succeeds **Fred Leibold,** vice president in charge of traffic who has retired after almost 25 years of service to Consolidated Freightways. Leibold will continue, however, as an active member of CF's

(*Please Turn to Page* 57)

Flying the Coop

BABY chicks and turkey poults undoubtedly are happier with this innovation in shipping boxes which assures them airier and safer cross-country flights from the nation's egg basket, Petaluma, California.

The new channel vent chick and poult boxes make it impossible to shut off air circulation from the birds. The box is two inches narrower and shorter on the top than at the bottom, and a six-inch wide channel vent crosses the width of the box in the center. When boxes are stacked, the tapering sides and ends assure a two-inch air passageway around each box, and the channel vent at least a two-by six-inch passageway on top. This arrangement prevents the air from being shut off by too tight packing. The unusual construction of the boxes also makes wooden slats between the boxes unnecessary and reduces weight, freight rates, and insurance charges.

A second desirable feature of these new boxes is the anti-toe-pinching device. When the old style box is lifted the bottom sags, causing a gap to form between the bottom and the sectional walls which catches the toes of chicks and poults when the box is set down, often causing death to the birds. This danger is prevented in the new box by the fact that the sectional walls are cut with a curve in them so that no gap is formed.

Free Literature

(Continued from Page 35)

Hand & Electric Hoisting

Yale hand and electric hoisting equipment is described in a new bulletin published by the Yale Materials Handling Div., The Yale & Towne Manufacturing Co. Titled "There's a Yale Hoist for Every Lifting Job," the 12-page ookblet illustrates the most suitable hoist for the "big" job, the "specialized" job, the "occasional" job and "every" job. Other illustrations show how Yale hoists save time, money and manpower in various industries.

Circle 22 on Service Card, Page 34

Coil Holders

A four-page folder distributed by Acme Steel Co., describes the coil holders available for their line of wire stitching machines. The construction and design of the 25 lb coil holder which mounts on the machine and an adjustable floor model, designed to hold two 50 lb coils are explained in detail. The bulletin also tells how users of stitching machines have increased production, reduced labor costs and acquired better stitching performance.

Circle 23 on Service Card, Page 34

Truck Caster Catalog

A new 80-page truck caster catalog, published by Faultless Caster Corp., includes new additions to the Faultless line, such as the spring action cushion ride casters in medium and heavy duty, new drawn steel wheels that will take static loads up to 4-tons on each wheel, floor truck locks, and numerous other casters.

Circle 24 on Service Card, Page 34

Tractor-Shovel

The Hough Model HR 4-wheel drive "Payloader" tractor-shovel is the subject of a new 16-page catalog. It contains action views of this 1 cu yd machine doing earth and material handling jobs for cities, counties, states, contractors, aggregate producers and industrial plants.

Circle 25 on Service Card, Page 34

BOOKS

Carrier Operating Rights

ICC policies regarding the regulation of intercity common and contract motor carriers have been assembled and discussed in this book with complete citations and more than 425 representative cases which effected the emergence of carrier policies. The ICC and Bureau of Motor Carriers legal procedures for handling motor carrier cases, including joint board procedure, are thoroughly treated. Factors affecting certification, granting of permits, plus chapters on private and exempt carriage, brokerage and factors affecting licensing, and summary of Commission policies are included. "Operating Rights of Motor Carriers (Interstate Commerce Commission Policy Regarding Property Carriers)" by Charles A. Taff, Ph.D., Associate Professor of Transportation, College of Business and Public Administration, University of Maryland, Wm. C. Brown Co., Dubuque, Iowa. 255 pp., $4.00.

Improved Apple Handling

The cost of handling boxes of apples by the method now most widely used at packing and storage houses in the Northwest can be reduced nearly one-half by the adoption of improved methods and equipment, a U. S. Department of Agriculture study in Washington State indicates. The most widely used method, employing belt conveyors and two-wheeled hand trucks, cost $60.28 per 1,000 boxes of fruit. The cost with industrial fork-lift trucks and 48-box pallets was only $31.99. The report, "Apple Handling Methods and Equipment in Pacific Northwest Packing and Storage Houses," may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for $1.50 per copy.

Package Design

Package design, a visual unit for selling a product, is in a state of flux, responding to changes in both selling and design. Since the theme is concerned with the visual, essentially this is a picture book, with text reduced to brief running commentary. Thus while supplying the reader with a wealth of illustrative material drawn from sources here and overseas, the book asserts those principles which have the capacity to translate sound package design in almost any field into a wise investment. A recognized designer here and in Europe, Ladislav Sutnar was professor of design and director of the State School of Graphic Arts in Prague; edited magazines on modern movement in architecture, product design and typography, an exhibition architect throughout Europe; chief designer for Czechoslovakia at the New York World's Fair in 1939. An active designer in New York, he heads his own firm, Sutnar-office, is consulting art director for Sweet's Catalog Service, New York, and other companies. "Package Design: The Force of Visual Selling," by Ladislav Sutnar. Arts Inc., 667 Madison Ave., New York 21. N. Y., 128 pp., 545 illustrations. $9.75.

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...Triple Feature

(Continued from Page 43)

for persons new to the field and persons with divided responsibilities.

The second section covered "Packaging and Materials Handling—Advanced-Executives." Prepared and presented jointly by SIPMHE and the Massachusetts Institute of Technology, this year's two-section course covered a wider range and attracted more attention than previous courses.

Subjects covered by the fundamentals unit ranged from, "Packaging—An Art or Science," to "Challenge to Packaging Engineers." Sessions were devoted to interior packaging, preservation, corrosion prevention, and industrial containers.

The advanced section leaned more to the technical and specialized phases of packaging and materials handling. Excerpts from some of the papers presented will be reprinted in future issues of DISTRIBUTION AGE.

The exposition itself, which attracted a record number of visitors, included live and semi-live exhibits of the latest equipment, systems and techniques developed by the giant packaging and handling industry. Many of the items, shown for the first time, will be presented in future New Products and Free Literature sections of DA.

Special Awards

The Harold Jackson trophy, presented annually to the entry incorporating the most satisfactory method of product protection against corrosion, this year went to K. Russell Colcord, Bradley Field, Windsor Locks, Conn.

The Irving J. Stoller Award for outstanding achievement in the development of interior packaging went to Earl K. Gustin, Bendix Products Div., Bendix Aviation Corp., South Bend, Ind.

Competition Winners

The following first place winners in regular competition classification were announced: Corrugated or solid fibre boxes, Henry W. Kelly, Westinghouse Electric Co., East Pittsburgh, Pa.; nailed wood boxes and crates, K. Russell Colcord; wirebound boxes and crates, James B. Jones, Locke Dept., General Electric Co., Baltimore, Md.; cleated panel boxes, Eugene Wald, Allen B. Dumont Laboratories, Clifton, N. J.; general containers, Julius J. Puchy, Weston Electrical Instrument Corp., Newark, N. J.; export packages, Alan Cohen, Stein Plastics Mfg. Co., Glen Cove, N. Y.; materials handling, W. H. Richardson, Driscoll Wire Co., Shelton, Conn.•

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Men in the News

(Continued from Page 55)

board of directors and direct the employee insurance program.

E. A. Whitehouse—promoted to the position of export-import traffic manager of Mathieson Chemical Corp.

Transportation—Air

H. E. Morley — appointed district sales manager for United Air Lines at San Francisco, Cal., and **Frank Van Gilluwe**—named district sales manager at Fresno, Cal.

William A. Patterson — president, United Air Lines, Inc., elected chairman, business-education committee of the Committee for Economic Development.

R. L. Mangold—staff superintendent of air freight for United Air Lines, named to chair the cargo advisory group of the International Air Transport Assn.

—Highway

A. F. Hammerstrom and **W. J. Balsis**—appointed traffic representatives on the Chicago sales staff of Yellow Transit Freight Lines. **Al Havlik**—manager of the new terminal at Lawton, Okla. **R. L. Plummer**—appointed traffic representative at Beaumont, Tex.

A. C. "Red" Jackson — named vice president and treasurer of RTC Carloading Corp. He was vice president in charge of sales and traffic for 7 years with Mid-States Freight Lines.

Fred Boston — Oklahoma Auto Dealers Assn., elected chairman, Oklahoma Conference.

Z. M. K. Fulton, Jr.—Master of the Virginia State Grange, elected chairman, Virginia Conference.

Paul W. Rice—appointed manager of the Fruehauf Trailer Co. branch factory at Greensboro, N. C.

Clyde B. Aitchison—former Interstate Commerce Commissioner, retained as a consultant to the trucking industry's National Traffic Committee.

Howard C. Shannon — appointed national sales manager of North American Van Lines, Inc. For 2 years he handled sales and agency relations.

R. G. Lochmiller—formerly P-I-E branch manager in Sacramento, Cal. has been appointed district manager for the company in Denver, Colo., and **O. R. Roberts, Jr.**—formerly district manager at Denver, appointed district manager at Los Angeles, Cal.

Kenneth A. Jeffries — appointed manager of the new branch of Trailmobile Inc. at New Haven, Conn.

William S. Hammel — appointed Chicago district sales representative, Eaton Manufacturing Company's Axle Div.

Luther E. Lawrence—elected assistant treasurer of Fruehauf Trailer Co.

E. A. Watkins — appointed motor truck district manager at Albany, N. Y., of the International Harvester Co. He succeeds **H. W. Moody** who is retiring.

H. Scott Byerly—appointed assistant to the general manager of the ATA.

H. David Collins — named branch manager for The White Motor Company at Portland, Ore.

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Grain Handling

(Continued from Page 47)

discharged into collecting chambers and sprayed with water, after which, as sludge, it is pumped into the sea.

The electrical equipment includes motors, starters, lighting and telephone. An elaborate electric control and signalling system makes it possible for any individual wagon load of grain to be traced throughout the elevator and identified at any stage of its journey. In addition, there is a pneumatic tube signalling system for transmitting messages from point to point in the building.

With 25 miles of wiring and 2,200 outgoing terminals a main panel controls the operation of the entire elevator.

Although previously the Argentine Government had planned a five-year industrial expansion program, in 1949 this was switched over to the promotion of agriculture.

It was announced that foreign exchange would be utilized to buy farm machinery from abroad for this purpose. It is not unlikely, therefore, that the next few years will see a substantial increase in the quantities of grain both harvested and exported. •

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A Nation's Experiment . . .

(Continued from Page 29)

and the respective Executives on matters pertaining to the withdrawals of services on branch lines and at stations.

The 1947 Act broadened the jurisdiction and functions of the Railway Rates Tribunal, created by the Railway Act, 1921, and merged into it the functions formerly exercised by the Railway and Canal Commission, and the Appeals Tribunal created by the Road and Rail Traffic Act, 1933.

The Tribunal was renamed The Transport Tribunal, and its functions include regulation of the classification, rates and charges of all transport carriers.

Partial Retreat

Parliament has passed the Transport Act 1953, which repudiates some aspects of nationalization and centralization which had caused widespread dissatisfaction. The Act became law May 6.

The first group of changes provides for denationalization of intercity goods transport. It directs disposal of more than 23,000 motor vehicles of 40,000 now owned and operated by the Road Haulage Executive, which will retain about 3,700 motor vehicles used in coordinated road-rail freight services. The railways will continue to operate about 14,000 motor vehicles in terminal collection and delivery services.

The Road Haulage Executive may own or acquire an interest in road haulage enterprises, but, if it does, it must obtain for these operations, as would any other road haulage operator—authority to operate from the Licensing Authority by showing that the proposed services are in the public interest.

About £30,000,000 of £80,000,000 paid by the British Transport Commission for the road haulage operations, represented good will of the road transport companies. This good will has shrunk to virtually nothing.

Liquidation of the road transport holdings will be financed by a tax upon all motor vehicles, excepting household removal vans, which is estimated to yield £4,000,000 a year.

Buyers of the nationalized road haulage vehicles will acquire licenses to operate for five years without any limitation upon distance of operation. Other road haulage operations will be restricted to the 25-mile maximum radius of operation imposed by the 1947 Act until the end of 1954.

The 1953 Act is a definite retreat from nationalization in the intercity road haulage facet of the transport industry, and a set-back for centralization of railway operations.

The Bill provides for abolition of the Railway Executive and its replacement by semi-autonomous regional railway units. The British Transport Commission is given responsibility for the administration of general railway policy matters such as: rates, fares and charges, wages, and design and construction of equipment.

The Commission will continue to own the railways, but their operation will be performed by regional railway organizations, thus ending duality of departmental control.

A significant change provided for in the 1953 Act, is in control of rates and charges. Under the new legislation only maximum rates and charges of railways are required to be published and filed with the Tribunal.

Railways are free to charge rates less than the published maximum rates to meet competitive conditions, particularly to meet road transport and waterway competition. Different rates, if less than the maximum, may be made for the same types of hauls and the same goods to meet different competitive conditions.

This change is a basic one in the regulation of rates of public utility enterprises, and places reliance upon competition rather than upon government regulation to protect users against monopolistic pricing.

The Transport Tribunal is given power, by the Act's "traders' protection clause," to protect users who are wholly dependent upon railway services against unreasonable or exhorbitant charges.

Rate Adjustment

The 1953 Act also affords railways protection against adverse effects of inflation by permitting them to apply to the Transport Tribunal for increases in rates and charges up to 10 per cent a year, and for the authorization of such increases as temporary measures by the Tribunal in ex parte proceedings without public hearing. Temporary increases may be reviewed by the Tribunal and changed if warranted by economic conditions.

The important lesson of the British experience with nationalized transport for the United States is that government ownership is no panacea for the problems of transportation—coordination, services, labor, management, finances, or rates.

These problems are all pressing ones which must be solved—and other means must be found. These problems are the challenge to private ownership and operation under constructive and equitable public regulation in the United States. •

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. . . In The Air

(Continued from Page 20)

Compromises had to be made when when ordering handling equipment. If it could not be adapted to a wide variety of uses, it had to be discarded. Often Piasecki engineers had to design their own.

Gradual Expansion

Gradual expansion resulted from increased production of Army, Navy and Air Force helicopters. A new plant was needed to manufacture all the military aircraft plus adequate acreage for additional facilities to handle eventual production of commercial helicopters.

Before the new plant was constructed in 1947 at suburban Morton, Pa., 20 miles from Philadelphia, handling helicopters and the larger engine parts through the air by overhead cranes was given greatest consideration. Today, a 5-ton overhead monorail crane system conveys parts over the entire assembly area, swiftly and efficiently.

Direct Control

Plant expansion is continuing at the Morton site as Piasecki undertakes the manufacture of more of its own production parts. With continued revisions, specification changes, new techniques, Piasecki will be able to have direct control of the manufacture of component parts, make immediate changes at less cost and loss of production time.

Starting with five engineers in a small Philadelphia store, the company now employs over 4,000 in four plants. This includes 414,000 sq ft at the main plant in Morton, Pa., 75,000 sq ft warehouse area at Eddystone, Pa., and 72,000 sq ft of office and warehouse space in Chester, Pa., making a total of 613,500 sq ft.

Foreign Subsidiary

Early this year the corporation also formed a subsidiary, Piasecki International Corp., for licensing, manufacturing and servicing aircraft in foreign countries, except Canada. A Canadian subsidiary also was recently organized.

Until some more time is experienced on the various models and production quantities increase, Piasecki must plan on two procedures, one for the normal routine of business, another for the modifications.

Handling methods used by other industries—where the variety of product is limited, volume is graded on a unit cost basis, packaging and shipping is standardized—cannot yet be adapted to the manufacture of helicopters. •

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. . . Distribution Costs

(Continued from Page 31)

A vigorous dissenting opinion, delivered by Mr. Justice Black with Mr. Justice Douglass concurring, stated the view that, although the Interstate Commerce Act grants the ICC broad powers to carry out the general purposes of the Act, the Commission does not have the power to "invoke vague implications to defeat the Act's purpose or to override its clearly expressed provisions."

The dissenting opinion urged: 1. That motor carriers are given by Congress the right to choose for themselves whether they will use leased or purchased equipment, and that this is destroyed by the burdensome restrictions;

2. That agricultural products transportation exemption provided by the Act is destroyed by the rules; and

3. That railroads that operate motor vehicles as part of the business of common carriage are granted special advantages in violation of the express policy of the Act which requires each method of transportation to be left to its inherent advantages.

Other Recent Cases

In a late decision the Supreme Court of the United States approved lowered freight rates on certain products. In this case a railroad company alleged confiscation of its property without "just compensation." This court held that the ICC may prescribe valid freight rates so low that the carrier will lose money on a phase of its business.

For example, in B&O Railroad Co., v. United States, 73 Supreme Court Reporter, 592, it was shown that the ICC prescribed unusually low freight rates on fresh vegetables. The carrier appealed to the court on the grounds that the new rates are so low that it will lose money on transporting the merchandise. The Supreme Court upheld the validity of the rates, saying:

"So long as a railroad is not caused by such regulations to lose money on its over-all business, it is hard to think that it could successfully charge that its property was being taken for public use without just compensation."

City Tax On Trucks

A few months ago the Supreme Court rendered an outstanding decision to the effect that a city tax is valid on all motor trucks.

For illustration, in City of Chicago, v. Willett Co., 73 Supreme Court Reporter 460, it was shown that a city passed an ordinance requiring motor truck owners to pay taxes to the city of $8.25 annually on trucks of less than 2-ton capacity to $16.50 on trucks of 4-ton capacity or more.

A company located in the city and which operates a fleet of trucks contested the validity of this ordinance. The Court held the ordinance valid although these various trucks also are used to transport merchandise in interstate commerce.

Use Tax Held Valid

Another outstanding decision was rendered by the U. S. Supreme Court recently. This decision upheld the right of a state to tax both private and common carriers as high as $1,580 annually for each motor vehicle "used on a highway" in the state.

For illustration, in Coordinated Transport v. Illinois, 73 Supreme Court Reporter, 468, it was shown that a state passed a law taxing motor trucks of both common and private carriers for "use of the public highways." The amount of the annual tax is dependent upon the gross weight of the vehicle.

Lease Held Valid

Considerable discussion has arisen from time to time over the legal question: Can a state compel a motor truck owner to obtain a permit to transport goods interstate? Recently the U. S. Supreme Court held in the affirmative.

Another important legal question involves the right of states to pass laws requiring common carriers, contract carriers and private carriers to obtain state permits. And whether a motor truck lease contract is made in good faith. All of these questions were answered by the Supreme Court in Lloyd A. Fry Roofing Co. v. Wood, 73 S. C. 204.

The facts of this case are: Fry Roofing Co. manufactures asphalt roofing products in Memphis, Tenn., and sends them in trucks to customers in nearby states. Some of these trucks are driven by their owners who leased them to the roofing company.

Five of these driver owners, while carrying interstate shipments for the roofing company on Arkansas highways, were arrested for having failed to obtain a permit as required of all contract carriers by an Arkansas state law.

The Arkansas state law provides that contract carriers must obtain permits from the state to operate motor trucks in the state, and for transporting goods interstate.

Carrier Files Suit

The roofing company filed suit and asked the court to enjoin the state's Public Service Commission from further molestation of the drivers. The counsel for the roofing company alleged that the state had no lawful right to compel its contract carriers to obtain permits because the state law exempted "private" carriers from that duty, and the roofing company is such a "private carrier."

Counsel for the roofing company argued that the company is a commercial enterprise, carrying its own products exclusively in its own leased trucks operated by its own bona fide driver-employes. And further, as the drivers are its bona fide employes, it necessarily follows that they need not get state permits as contract carriers because they were not in the business of transporting goods for hire.

The counsel for the roofing company also contended that requiring either the company or the drivers to get state permits would be in violation of the United States Constitution and would invade a field of regulation preempted by the Federal Motor Carrier Act. This was so because compelling the company to obtain permits to transport merchandise interstate from Arkansas into other states would violate interstate commerce laws.

State Argument

The state argued that the company's lease of trucks and operation of them by its own employes were mere pretenses—a subterfuge to enable the company to evade and escape obtaining permits under the Arkansas Motor Act.

After lengthy hearing the lower court held that the arrested drivers were in fact bona fide employes of the company and that the truck leases were also bona fide, and that the company was therefore transporting its own goods as a private carrier exempt from the state Act. For this reason the court held that the Act did not require either petitioner or its drivers to get a permit. Accordingly the Commission was enjoined as prayed.

The Arkansas Supreme Court reversed this decision holding that arrested truck drivers were not the company's employes, that the truck lease arrangements were shams, and the company was therefore a shipper —not a carrier of any kind. In this situation the court held that the driver-owners were in reality transporting the company's goods as "contract carriers" for hire, engaged in the very kind of business for which Arkansas law required a permit.

Supreme Court Appeal

The case then was appealed to the Supreme Court of the United States which held that a state law is valid which requires contract carriers to obtain permits from a state to transport goods interstate. The Supreme Court said:

"A state can regulate so long as no undue burden is imposed on interstate commerce, and a mere requirement for a permit is not such a burden. At present we hold only that Arkansas is not powerless to require interstate motor carriers to identify themselves as users of that state's highways." •

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Fork Truck Efficiency Test . . .

(Continued from Page 25)

test readings should be recorded on a data sheet similar to those shown in Fig. 2. These sheets, developed by the engineering department at Mercury, are used to rate the performance of new trucks before before they are shipped, and for periodic check-ups of equipment in use. The form you use may or may not have to be this complete, depending upon the other records you keep on your equipment.

Although it is possible for one man to both operate the truck and take the necessary readings, the test can be run more easily and with greater accuracy when one man drives and one man records test data, as shown in Fig. 1.

How to Run the Test

Here is a step-by-step outline of how the test should be run:

Measure off an 88-ft length on the 200-ft stretch of concrete, with at least 50-ft approach at each end.

Weigh your truck without load. Record drive-end weight, trail-end weight, and total weight values in the appropriate places on your sheet, Fig. 2A.

Connect your voltmeter across the battery terminals and put your ammeter in series with the main line by connecting it between the battery and the controller.

Run your truck in a forward direction (forks leading toward the test course). Start your stop-watch as the truck passes over the zero mark on the course. Record ammeter and voltmeter readings in columns 1 and 2 of "travel performance light" table.

Stop your watch as the truck passes over the 88-ft mark. Bring your truck to a stop near the end of the 200-ft distance. Record the elapsed time for the 88-ft forward traverse in third column.

Start your truck in a reverse pass across floor (forks trailing), repeat the timing and meter-reading procedures specified above and make the appropriate recordings.

When conducting the first test on any given course it is a good plan to turn the truck end for end and repeat the above procedure so as to make sure that the course is level.

Hoist Measurements

Measure-off and mark with chalk two 2-ft vertical distances, one on the main and one on the telescopic member of the hoisting mast and chalk off one indicating mark at the middle of the vertical part of the fork assembly and another near the bottom of the telescopic mast, Fig. 5.

Start the hoisting mechanism. Start your watch as a selected point on your fork assembly passes the zero chalk mark on the telescopic member. Record the ammeter and voltmeter readings in the "hoist performance" table on your form.

Stop your watch as the point passes 2-ft chalk mark. Record the time for the fork assembly to traverse the 2-ft interval.

Repeat the above procedure recording the ammeter and voltmeter readings and the travel times involved in the elevation of the telescopic channel assembly through the measured 2-ft interval.

Loaded Reading

Next, pick a capacity load, weigh the truck with load and repeat all of the previous procedures, this time recording the data in the "truck loaded" columns.

When these readings are entered on your sheet, make right and left turning-radius measurements and forward and reverse tilt measurements. The usual procedure for turnng-radius measurement is to successively steer the truck through clockwise and counter-clockwise circles with the minimum available turning radius (steering hard over) and drawing the turning circle on the floor by means of a chalk stylus positioned at the projecting rear corner. Measurement of this inscribed circle will give the turning radius in the direction operated.

The Calculations

The test is now complete. Next come the calculations.

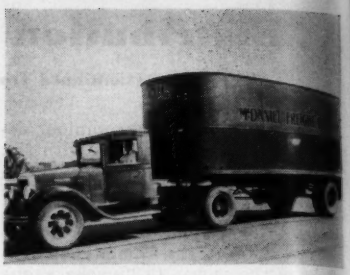
The 88-ft distance is used in this test to simplify calculations. It does so because 88 ft/min (or 60 sec) equals 1 mph. In other words, if the 88-ft run is timed in 10 sec, the truck is traveling 60 sec or 6 mph.

$$\frac{}{10}$$

In this manner, the four travel-speed figures—one forward and one reverse with the truck light and one forward and reverse with the truck loaded—are obtained. Forward and reverse readings are taken to assure that the truck operates with equal ease in both directions, or to indicate defects such as brush mis-alignment.

Because industrial-truck batteries that are in constant use are sometimes below their rated voltage levels, we must correct the recorded travel speed reading we have just calculated by multiplying it by *rated voltage* and dividing by actual *read voltage*.

For example, if as we have determined, our measured travel speed is



Leonard McDaniel, president of McDaniel Freight Lines, Crawfordsville, Ind., at the wheel of his first tractor-trailer unit. After 25 years, this Fruehauf van still operates in a fleet that handles approximately a million lb of freight daily.

6 mph, the truck is powered with a 15-cell lead-acid battery of 30-volt rating, and our voltmeter reading test is only 28 volts, we must calculate as follows:

$$\frac{6 \text{ mph} \times 30 \text{ volts}}{28 \text{ volts}} = 6.43 \text{ mph}$$

We follow the procedure with all "recorded" values to get corrected (or true) mph figures.

With this done, we are now ready to calculate the truck's power consumption rate. To do this, we use the following formula: *Watts* per *ton* per *mile* per *hour* equals voltage times current divided by speed (in miles per hour) and truck weight (in tons), or:

$$\text{WATTS/TON/MPH} = \frac{V \times A}{S \times W}$$

where V and A are voltage and current values, as read, and S and W are speed and weight. For example (from Fig. 3A):

POWER CONSUMPTION

$$\frac{28 \times 65}{\frac{4.58 \times 5390}{2000}} = \frac{1820}{4.58 \times 2.69}, \text{ or}$$

POWER CONSUMPTION
147 WATTS/TON/MPH

Next, we calculate hoisting speeds, in feet per minute, by inserting time and distance figures from the hoist performance table into the following formula:

$$\text{HOISTING SPEED} = \frac{2 \text{ ft} \times 60}{\text{Time}},$$

the 2-ft figure being the chalk-marked distance on both the main and telescopic members of the hoisting mechanism, the time being in seconds (as recorded), and "60" being the conversion factor. From our data, the

Typical of the trend toward closer manufacturer-dealer liaison was this recent Miami Sales Meeting held jointly by the Harnischfeger Corp. and the Frank T. Budge Co., P&H Miami Hoist distributor. The clinic was held to equip the salesmen so they can better advise customers on the use of "thru-the-air" handling

hoisting speed in the first stage (in the telescopic channels) and without a load is calculated to be:

HOISTING SPEED

$$\text{Main} = \frac{2 \text{ ft}}{3.6 \text{ sec}} \times \frac{60 \text{ sec}}{1 \text{ min}}, \text{ or}$$

HOISTING SPEED

Main = 33.3 ft/min

Other hoisting-speed values—for the loaded first stage and for loaded and unloaded second stage (in the main channels)—are calculated in the same manner.

What the Figures Mean

We are now ready to turn these test figures and calculations into useful tools that will tell us how well our equipment is performing and indicate which parts need adjustment, repair or replacement. We do this by analyzing and comparing operating characteristics with rated characteristics. The procedure we should use is as follows:

Look for deviations from normal. If there are none and your power-consumption rate is between 100 to 120 *watts* per *ton* per *mph*, your truck is in top operating condition. If there are none and the work output of your truck is far below expected levels—for example, if the truck gets only five hours of operation on a charge, rather than eight—then either of two conditions must exist: 1. Work conditions must have changed or; 2. The battery must be at fault. If it's the latter, the battery deterioration may be excessive.

Reasons for Deviations

If there are deviations from normal in your travel performance figures, one of three conditions probably exists. Here's what to look for:

Condition 1: If *current values* are *up* and *traveling-speed values* are *down*, the truck is either operating with excessive mechanical friction or faulty tires. Excessive mechanical friction might be caused by dragging brakes, a jammed or tight oil seal, a broken or frozen bearing, lack of lubrication, or mis-alignment in either the steering or driving mechanism. A faulty tire condition might mean a flat spot on the tread, a loose tread (because of faulty tire compound), or a cut tire.

Motor Trouble

Condition 2: If both *current values* and *traveling-speed values* are *up*, there is definitely trouble in the motor—for instance, weak fields caused by one field being fully or partially shorted out.

Condition 3: If *current values* are *normal* and *traveling-speed values* are *low*, there is a loss of voltage between the battery and the motor. This voltage loss can be caused by either loose bolts at battery terminals, poor connections between lugs and wire, poor contact at controller tips, poor contact between commutator and brushes, or loose connections inside the motor.

Hoist Performance

In a high-lift system, if hoist performance is below normal, then either of three conditions exist: 1. Fluid liquid flow is impeded or restricted; 2. The fluid is by-passing and not doing its assigned work, or; 3. Mechanical friction is responsible. If a fluid flow restriction is present in the pressure line, such as a kinked copper tube, current values will be up and hoist-speed values down.

A restriction in the intake or suction line can usually be detected by excessive pump noise. When the fluid is by-passing, pressure will be low. The truck will lift its full rated load at reduced speed, or it may not lift it at all. Look for hoist cylinder packing leakage, low relief-valve setting, or an external leak. Mechanical friction will cause current values to be high and hoist speeds to be low. High current values coupled with excessive hoist speed indicate motor trouble.

With this background knowledge, let us now evaluate the operating performances of the trucks whose tests sheets are shown in Fig. 1. Our first indication that something is physically wrong with the truck whose test sheet is shown in Fig. 1A, is the high power consumption figure, particularly in the "travel performance light" table. This 147 *watts* per *ton* per *mph* figure tells us that not only is the truck wasting over 20 watts of power, but that unless some corrective measures are quickly taken, serious and costly damage will result. Other records, not shown, proved that this truck's performance had not been checked in six years and that during this time it had been subjected to continuous abusive use.

Source of Trouble

Let us investigate further. As explained in Condition 1, the high current and low traveling speed values of 65 amp and 4.58 mph indicate that the truck is operating with either excessive mechanical friction or faulty tires. Closer inspection of the truck, now that we know what we are looking for, reveals that the truck's brakes are dragging.

When corrected, performance figures were slightly better than manufacturers test figures. Tests after substantial use reveal improved operation because gears, brushes and all moving parts become properly seated and broken in.

Next, let's look at this truck's hoist-performance figures. Comparison with the manufacturers performance test, made when the truck was new, reveals that the first-stage hoist performance figures, both light and loaded, are unchanged. However, the performance figures of the second stage of hoisting show considerable deviations.

Defective Bearings

Instead of approximately 130 amps, 4.6 sec and 26 fpm, in the loaded condition we have now 180 amps, 6.1 sec and 19.6 fpm. Investigation showed that this poor performance was caused by a defective roller bearing in the second stage of the lift mast.

The difference in turning-radius figures was found to be caused by a bent steering arm. When the arm was straightened, equal turning radii were restored. The forward and reverse tilt degree figures (3 and 10 deg), indicate no malfunction in the tilt mechanism.

In contrast to this, the test figures in Fig. 2B indicate economical, low-cost fork truck operation and no mechanical defects. •

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Substitute Service . . .

(Continued from Page 45)

2. There is no empty car mileage in the handling of lcl traffic.

The Objectives

Having established economic value to the railroads in the handling of lcl traffic by either method of calculation, and also value from the viewpoint of holding carload traffic to the rails, it follows that careful study and thought should be given to handling methods. Therein lies service, economy and the opportunity to increase profit.

There is an art in lcl handling too often not observed. The traffic should not, and is not, simply started over the railroad to move according to the whims of those handling it. Efficient handling comprehends the movement from origin to destination in the quickest possible time, with a minimum of handling and damage.

Substitute Service

One of the most important factors in railroad use of other means of transportation is the possibility and advantage of the substitution of highway for rail service.

For many years, smaller stations, regardless of location, were served by "peddle" or "way" cars. Obviously, the slow movement of these trains is a serious interference with the movement of other trains on main tracks. On all lines, it means a maximum expense for handling.

Not long after the motor truck came into existence alert railroad officers saw an opportunity to use its mobility in the handling of lcl traffic. They put lcl traffic on the highways, which often directly parallel the railroad. Even when main highways are some distance away, there is always access to the small communities on the railroad by feeder roads.

Initial experiments developed an astonishing difference between the cost of operating peddle freight trains and the cost of moving lcl by truck.

Tangible Gains

Substitute services has reduced the expense of handling and provided from 24 to 72 hours improvement in service to smaller communities. Depending on circumstances, the smaller points get the same service on inbound or outbound traffic, sometimes both, as furnished in larger cities.

The general plan of operation is simple, i.e., the loading of "through" or "direct" cars to be more important, or zone stations of a railroad, usually main line points, and the distribution by truck to the smaller and branch line points.

Substitute service operations of the Pennsylvania Railroad cover 83.3 per cent of its mileage, from New York and Philadelphia west to Chicago and St. Louis.

Fig. 2 shows substitute service operations of the PRR between Philadelphia and New York, with radiating branch lines.

LCL cars move between the zone stations at Philadelphia, Trenton and Newark, with the stations in the broad intervening area served by trucks moving in and out of zone stations.

When operating conditions permit, these trucks by-pass the local station entirely by making pick-ups and deliveries at shippers' and consignees' places of business.

Extended Service

Some railroads, noting the benefits of substitute service considered the advisability of the movement of lcl traffic between zone stations and larger communities in the surrounding area, with sufficient volume to ordinarily justify the use of box cars.

A new form or extension of substituted service was devised, called extended pick-up and delivery service. Each truck moving traffic between zone stations and larger communities, picks up and delivers at patrons' doors, by-passing local freight stations.

Fig. 3 shows PRR distribution by this method to larger communities in the Pittsburgh area. Similar plans are being used in other large Eastern and Midwestern cities.

S. R. Burkholder, of Sparks, Nev., selected by ATA as 1953 Driver of the Year, is shown receiving from Ralph B. George, fleet sales manager of Trailmobile, the Trailmobile Driver of the Year trophy. Burkholder was picked for the honor because of his excellent record for safe driving and extreme heroism in assisting persons injured in highway accidents during the year

The use of motor trucks in intra-terminal service also has been of tremendous advantage in improving service and reducing expense.

Before the advent of the motor truck, railroads maintained numerous freight station facilities for the accommodation of lcl freight in the larger cities, conveniently located with respect to community needs.

This plan resulted in a great number of duplications of loading arrangements and the utilization of an excessive number of cars loaded far below the cubical capacity. A great volume of the freight so assembled was forwarded through intermediate transfer stations.

Concentrated Loading

Under a plan of concentrated loading, a suitable station facility conveniently located was selected for the assembly of all lcl freight in the district. The freight was handled to and from out-lying station facilities by motor vehicle.

This method substituted the motor truck for intra-terminal rail switching service. It made economically possible earlier deliveries and later closing hours for the receipt of outbound traffic. The concentrated aggregate volume of traffic resulted in a greater utilization of the carrying capacity of freight cars, a greater range of direct distribution of the traffic, improved transit time, and in many instances complete elimination of transfer handling enroute.

The substitution of motor vehicle service for cars in the interchange of traffic between railroads at junction points similarly improved the service, eliminated terminal switching and conserved freight car equipment.

Other Factors

In addition to the substitution of highway service for rail service, there are numerous factors of station operation that tend to promote service and economy.

Fig. 5 shows a sketch of platforms, tracks, crossovers, etc., of a station designed to facilitate the movement of lcl traffic and to enable effective use of modern handling equipment.

Planning and Loading

It is in the loading of traffic for quick, economical movement that the art of lcl handling is clearly portrayed. In good station operation every agent has advice of the points to which he shall forward cars containing lcl traffic.

The destination advice is commonly called Loading Instructions. They are continuously under scrutiny to insure quick movement and minimum number of handlings.

Under loading instructions, transfer of lcl traffic is held to a minimum. Contrary to a general misunderstanding, some remarkably low records have been made in the unmber of times freight has been transferred on a railroad. The Pennsylvania, at the present time, transfers each ton of lcl traffic carried, one-half of one time.

Transfer Records

Patrons expect and demand tracing from the railroads, which means maintenance of transfer records. A solution of the problem has been found in the adaption of a ballot, used to insure that freight handlers move shipments to the proper car, as shown in Fig. 4.

By merely showing on the ballot the waybill number of the shipment being transferred or loaded and filing the ballots in an envelope on which is placed the initial and number of the car from which the traffic was moved, a positive transfer record has been established.

These envelopes are then filed by the last two or three digits of the car number. When a record is required, which should always include the inbound car number, the proper envelope is secured and record of the shipment is obtained, even if, through oversight, it is loaded into the wrong car.

A simple method to expedite shifting of cars into outbound trains and to minimize switching is to load cars so that at the close of the day they can be moved to the outbound trains as a block rather than as units.

Proper freight handling, with a minimum of damage and reduction of excess handling, can be expedited through the use of mechanized handling equipment. The type equipment to be used depends almost entirely on the physical set-up and facilities at terminals.

The use of wood or steel containers on wheels to expedite handling, and of a convenient size to accommodate large shipments of small packages, save checking and rehandling of packages enroute. Where conditions are suitable the containers may be loaded at the shippers' places of business and moved direct to the consignees' places of business.

Loss and Damage

Loss and damage is a hazard to good public relations and a source of heavy expense to a railroad. It is usually caused by breakage of packages when the load shifts length-wise of the car or by crushing from the weight on packages loaded on or near the floor of a car.

It can be materially reduced by equipping cars with special devices to prevent shifting of load and the crushing effect when cars are loaded to capacity, or by bulk heading.•

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Nut Growers Solve . . .

(Continued from Page 23)

that contain shipments for from one to 20 buyers.

In situations where they have country jobbers to deal with, the warehouse usually unloads the nuts, segregates them and distributes them to the local buyers. He does not permit the nuts to be delivered until the draft for payment has been made.

Sold Before Shipment

In most cases, the nuts are sold before they are shipped. However in the case of spot shipments, stocks are warehoused and put in storage for the NNG.

This is done only in key markets such as Kansas City, Cleveland, Chicago and New York. In cities of this size, purchasers have the shipments hauled from the warehouses by their own trucks.

The organization is using motor freight with increasing frequency for shipments as far East as Chicago. Lack of uniformity in state laws is a problem, however.

For example, Consolidated Freightways moves as far East as Glendive, Mont. There the motor freight line must unload the nuts and put them into semi-trailers.

Due to their short marketing season, nuts are an item that demand the fastest type of transportation possible. The association is aiming to make speedier store-door deliveries.

Unloading and distribution of loaded rail cars is retarded seriously by the warehouse five-day week. Any rail car that arrives at noon on Friday generally is not unloaded and distributed until noon the following Monday.

Distribution Job

The distribution job of NNG is a difficult one. A bill of lading is sent with the goods, and a draft is forwarded from the western bank to the consignee's bank in the East.

The purchaser must pay the draft in order to get delivery. The Growers keep control of the nuts until they are paid for. The warehouse company checks the overages, shortages and damages, and tries to protect the shipper from damage suits.

The truck driver who brings his load across several states to an Eastern city calls the Chicago representative, even if it is late at night, in an effort to get his shipment unloaded without delay.

Shipments of this kind require much work at unseasonable hours. For example, when a truck load of nuts arrives in Minneapolis, bound for Chicago, the driver calls Chicago to report on his position and time of departure. He also obtains road reports so that he can estimate his arrival time with a fair degree of accuracy.

Rail Shipping

When the nuts are sent by railroad, the NNG tries to ship in cars that have been used for automobiles or furniture. These cars are larger and usually in a better condition than other types.

The traffic manager prefers high class big 40's or 50-ft freight cars. Six hundred 100-lb sacks loaded in five tiers constitute a simple 60,000-lb shipment. However, shipments generally contain one or more bulkheads and consist of up to 75 pack-styles and grades.

Heavy moisture-proof paper is placed on the car floors and Kraft paper is stapled to the walls. Heavy cardboard sheeting reinforced with supporting steel straps is placed on car doors to cut down damage and subsequent claims.

Fork trucks are used in warehouses for greater efficiency and speed. The fork trucks go inside the freight cars to unload pallets.

The railroads charge a local milling and storage transit rate of 6 or 7-cents-a-hundred basis carload for a maximum of one stop en route for temporary storage or additional processing. The rate is higher in proportion to the greater distance involved.

Packaging Practices

NNG packs an increasing percentage of its filberts and walnuts in cellophane bags of 1-lb consumer size, packed 30 or 50 to the carton. For walnuts, duplex bags are used to prevent puncturing and bad order shipments.

Single walled bags are found to be of adequate strength for filberts. Special shipping cartons are used for cellophane bags. These are of egg crate type construction, so that each package is in a compartment by itself.

Cardboard tier pads are used between layers of bags. The biggest cellophane containers are 50 1-lb sacks, but there is a trend toward the smaller-sized 30-lb carton.

The central organization packs and sells vacuum cans of shelled walnuts. Individual tins hold four ounces each and are sold in cases of 24's.

Shelled walnuts are shipped bulk in 25-lb containers, but some 5-lb sizes also are packed and shipped. These move to distributors in master sleeve cartons of six each. Shelled filberts go to market in cartons of 35 lb and in bags of 100 lb. Bags are of multiple construction, with the outer layer composed of burlap and the inner one made of special moisture and dustproof paper.

Shipping walnuts is more difficult than shipping filberts. The walnut has two distinct halves and sometimes the two halves of the shell are not too well sealed. The filbert, on the other hand, has a firm hard shell and does not require the careful handling necessary with walnuts.

The filbert can get by with dry, common storage in any part of the United States except the Deep South.

The walnut is more delicate to handle. It must be stored during the late spring, summer and early fall under conditions of cooler storage from 34 to 36 deg because of its susceptability to rancidity and insect damage.

Plans are in the mill for a building to house the entire central operation of the NNG, including shelling plants, cellophane packaging and the sales offices located under one roof in the industrial Portland area.

Membership in the Northwest Nut Growers through one of the local units helps growers in two ways. It makes possible the operation of a positive selling and merchandising program creating consumer demand. It also permits the processing and packaging of member's crops at the lowest possible cost. •

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MHI HANDLING CLINIC

As a service to readers, DA is presenting a series of questions and answers taken from the recently organized MHI-AMHS Traveling Clinics. The questions and answers are being reproduced here because of their general value and because many DA readers are unable to attend the clinic sessions. This month's question is taken from the first clinic, in New York, June 10.

Q. *What is the average life before replacement of 1500-2000 lb electric stacker? An electric pallet hand truck?*

A. The discussion on these questions was rather short since there are so many variables which could affect the life of such units.

Assuming a work day of 8 hours, 260 days a year, an average life of 10 years is conservative, providing, there are no abnormal operating conditions to affect this.

At the above rate of use, the life of the battery would be about 5-6 years. However, the battery life is more a matter of the number of cycles of charge and discharge than calendar life.

Q. *How can an engineering department win approval for purchase of an item they have thoroughly investigated, completely presented—but have not been able to obtain agreement on feasability of purchase from the accountants under present tax structure? Top management places engineering on one side—accounting on the other, and must decide from arguments of the two, on decision for an expenditure.*

"Okay, so it's an all-in-one rubber car —who wants one?"

A. There are a number of opinions and ideas offered, among which the following seemed worthy of note.

The presentation of the picture as a sales story rather than cold engineering facts—would sell much more. Pictures or 3D models of present equipment and methods and the cost of operation or production nearest book value, etc., plus adjunct conditions such as employe problems related to present methods.

In addition, pictures or 3D models of proposed equipment and methods and expected cost of operation or production. Present picture of cost of new equipment or method changes and amortization period; recapture on sale of replaced equipment.

List advantages in new method and or equipment including intangibles (employe morale, safety, etc.) as well as increase in production and savings in space, quality, etc.

Putting all of this in picture or model form rather than words sells much more than any other way. The intangibles and the savings in overall expense picture considering not only initial cost, but all factors, is of great importance. Emphasize the pay-off period, including intangibles.

Airlines Promote . . .

(Continued from Page 21)

of a uniform airbill, simplification of transfer procedures, and by the utilization of interchange flights. As a result of these simplified procedures, in-transit time has been reduced to a minimum with a resultant decline in claims precipitated by delay.

This speedier movement of shipments enroute serves to minimize the possibilities of pilferage and also eliminates, in most instances, the necessity for tracing. Where tracing services are required, the cargo dispatch manifests, interline transfer manifests, and the uniform airwaybill allow the air carriers to determine location of a shipment enroute easily.

Terminal handling of airfreight also has been vastly improved within the past few years, to keep pace with constantly increasing volume. Through the facilities of Air Cargo, Incorporated, a network of cartage contractors has been made available at all of the major cities served by the air carriers. These cartage contractors handle pickup and delivery of airfreight shipments from and to the commercial areas of cities served by the local airports.

Claims Simplification

In spite of all the claims prevention measures, there are, of course, occasions where claims arise. In claims handling procedures, the airline industry has made a diligent effort to provide fast, efficient, and thorough service. All claims forms have been standardized so that the claimant may present his claim with a minimum of difficulty.

Claims handling procedures between the air carriers are coordinated through the Cargo Claims Subcommittee of the Airline Finance and Accounting Conference. This group, meeting twice each year, discusses mutual problems arising from claims handling during the six-month period. It makes recommendations to various cargo services and tariffs departments which will simplify or correct existing procedures or tariff requirements and facilitate prompt disposition.

Although the character of airborne shipments is predominately of a perishable nature and packaging and crating requirements for airfreight movement are much simpler and less bulky than those for surface movement in general, claims figures for the airline industry show a loss ratio of less than one per cent of gross revenue. This compares with 4 per cent for rail lcl traffic and 1.32 per cent for motor freight (1951 figures from Association of American Railroads and American Trucking Associations, Inc.).•

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Washington DA

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Railroad Shipping Railroads can expect to handle about the same tonnages of freight during the last quarter of 1953 as for 1952. Regional shipping advisory boards estimate that rail freight for the last three months will run at about 7,700,000 carloads. Increases are expected in tonnage of spare parts and frozen fruits and vegetables. Loadings are seen as dropping off for farm equipment, motor vehicles, poultry and dairy products, and some other commodities because of seasonal reasons.

Tanker Program Mobilization officials will go to Congress next year to urge that action be taken to step up construction of tankers. Office of Defense Mobilization is highly concerned about this specific program which is dragging its heels. As one official puts it, the interim goal for tankers (as well as for ore carriers) is farther now from being met than six months ago. Several bills are pending, and ODM has some ideas about how the program can be stepped up if Congress will approve.

Diesel vs. Steam Conversion from steam to diesel power for railroads has reached an advanced stage but from here on the change-over is likely to be at a reduced rate. At the last count by ODM, less than 8000 steam locomotives remain in active service for freight movement. But replacement rate is slowing down. During the first eight months this year, more than 1500 new diesels were put into service—about 600 fewer than last year. With the backlog of new orders declining, the trend will continue for the rest of the year, at least.

Capitol Trends Deliveries of hard goods for the defense program and military needs have reached a rate of $2.5 billion a month, will probably remain at or near that level for a considerable period. Present plans for defense and the military services call for an expenditure of $40 billion next year, just about $2 billion less than for this year.

. . . There'll be no cutback in the goal for building 600 modern transport aircraft. Planes are to be of a type quickly convertible to military transport. Certificates of necessity have been issued already for about 370 aircraft, leaving 230 to go.

. . . Railroads are setting up a research group to find ways and means of improving the handling of less-than-carload freight. Group will work out of Chicago.

. . . Commerce Department's new Business & Defense Services Administration will have a Containers & Packaging Division with Charles A. Lewis as its director.

. . . Presently under charter to the Military Sea Transportation Service are 179 privately owned and operated American-flag cargo ships and tankers, including 24 signed up during September.

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For Additional Warehouse News See Warehouse Spotlight . . . Page 70

WAREHOUSING

WITHIN THE LAW

By Leo T. Parker
Legal Consultant,
Distribution Age

Numerous modern higher court decisions are in discord with the older courts. For this reason warehouse officials, and employes should keep abreast with new decisions.

To what extent is a warehouseman liable for damage to stored perishable goods?

During the past several months this question has been presented: "What is the legal liability of warehousemen who store perishable goods?"

Last month a higher court answered this question.

For example, in SPI Co. v. United States, 201 Fed. (2d) 59, it was shown that a warehouseman accepted perishable grain for storage. An indemnity company furnished a bond for the warehouseman.

The warehouseman made some efforts to aerate the wheat and eliminate sunshine heat during the period it was being received at the elevator. He turned all the wheat for the first time in August. He turned it again in September, and again in December, 1948. He started to turn it again in February and found it was out of condition and he did not complete the fourth turning of the wheat.

In subsequent litigation, the higher court decided that the grain was damaged due to negligence of the warehouseman. In fact the court gave reasons for the warehouseman's liability:

1. He did not turn the wheat often enough; 2. He did not properly check its condition or make proper tests for heating; and 3. He did not use due care to guard against insect infestation in that:

a. He did not apply enough fumigant; b. He did not apply the fumigant in the proper manner; c. He did not turn the grain soon enough after fumigation; d. He did not make proper tests to ascertain whether the fumigant had been effective or to find out whether the grain was infested with weevils.

The higher court held, "It follows that the warehouseman was liable for breach of his duty and that the indemnity company was liable on its bond as surety because he failed to well and faithfully perform all of his duties as a public warehouseman."

According to late higher court decisions, warehouse negligence may be presumed.

According to a late higher court decision, negligence of a warehouseman may be presumed. This law is applicable to warehousemen, their employes and also to custodians employed by warehouse customers.

For example, in O— v. B— Warehouses, Inc., 202 Fed. (2d) 689, it was shown that various customers of a bonded warehouse employed a custodian who signed a usual bond.

In subsequent litigation, the higher court held that the custodian could not avoid his negligence on the ground that conditions which existed when he voluntarily assumed the obligation rendered it impossible of performance. The higher court said:

"If he (custodian) was not advised of his duties and obligations under the contract, or if he was in doubt as to the significance of the terms of the bond, it was his responsibility to acquaint himself with them. He willingly accepted the benefits of the employment, and now, after the loss has occurred, can not effectively urge in avoidance of his own negligence that the conditions which existed at the time he voluntarily assumed the obligation rendered it impossible of performance."

Therefore, it is quite apparent that one who assumes an obligation cannot avoid resultant responsibilities by testifying or proving that he did not realize his obligations, or that conditions arose which made it impossible for him to fulfill the assumed obligations.

Is a law officer liable for attaching goods outside his legal jurisdiction?

Recently a reader asked: "If a sheriff exceeds his lawful rights can he be held personally liable for attaching merchandise?"

According to a late higher court decision a sheriff may be personally liable.

For example, in DM Co. v. P—, 230 Pac. (2d) 328, a sheriff was held personally liable for illegally attaching merchandise. For comparison, see Jackson, 97 Utah, 41.

According to a late higher court decision, a warehouseman may release or reduce his common law lien to secure payment of lawful charges on stored goods.

For illustration, in HVM Corp. v. B—, 189 Fed. (2d) 481, the question was presented a higher court whether a warehouseman could by contract, or clauses in the warehouse receipt, restrict himself to a specified lien. The higher court held in the affirmative, saying:

"Notwithstanding that the warehouseman's statutory lien is a general one, it would not be against public policy for the warehouseman, in the storage agreement, to restrict himself to a specific lien."

In other words, if a warehouseman is so foolish as to sign a contract which limits his lawful lien, to secure payment on storage and service charges, such contract is valid.

What are requirements for warehouseman to limit amount collectable on lost goods?

A reader asked this question: "What are the legal requirements for a warehouseman to limit the amount collectable by the owner of lost stored goods?"

The warehouseman must have charged a relatively low storage rate, and the owner of the goods must have been given an opportunity to pay a higher storage rate to secure full insurance protection.

For example, in L— Insurance Co. v. F. Z. C., 95 N. E. (2d) 230, the testimony showed that an official of a storage company suggested to the owner of valuable merchandise that she avoid further insurance expenses and place a minimum valuation of $100 on the merchandise for storage purposes at an annual cost of $2.

To this the owner of the merchandise agreed. A few days thereafter the warehouseman mailed to the owner of the merchandise a storage receipt which contained a brief description of the merchandise and specified the owner's valuation at $100. In addition the receipt contained a clause, as follows: "Subject to the following terms and conditions: 1. The liability for loss or damage shall in no event exceed the valuations specified."

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Warehouse SPOTLIGHT

NARW Safety Campaign

An industry-wide safety program has been launched by the Safety Committee of the National Association of Refrigerated Warehouses under the chairmanship of A. R. Carstensen, president, Crystal Ice & Cold Storage Co., Sacramento, Cal.

The primary objectives of the project will be to determine the types of safety programs already in operation by individual warehouses; the most frequent types of accidents; the employes whose work makes them the most susceptible to injury; and the amount of man hours lost through injuries suffered on the job.

—DA—

MWA Elects Officers

The following officers were elected last month at the annual meeting of the Missouri Warehousemen's Association.

General—Claude Roberts, president; Charles C. Daniel, vice president; Mrs. E. M. Busey, secretary-treasurer.

Household Goods—H. D. Silsby, president; Otto Long, vice president; Robert Wilson, secretary-treasurer.

Merchandise—Elmer Kreftmeyer, president; C. C. Daniel, vice president; Mrs. Busey, secretary-treasurer.

Men in the Spotlight

Jerry P. Johnson—appointed sales coordinator, Merchants Refrigerating Co., New York, N. Y.

D. H. Overmyer, president of the D. H. Overmyer Warehouse Company, Toledo, Ohio, elected to the board of directors, Transportation Association of America. He is the first warehouseman to receive this honor.

Charles A. Woelfel—appointed executive secretary, California Moving & Storage Association.

Walter E. Bernd—promoted to vice president and supervising engineer, The Terminal Refrigerating & Warehousing Corp., Washington, D. C.

William F. Fleig, president of Evansville Ice & Storage Co., Inc., Evansville, Ind. — elected president, Great Lakes chapter, NARW.

W. W. Warren, president of Warren Transfer & Storage Co., Oklahoma City, Okla., member of Allied Distribution Inc. and president of United Van Lines—elected a director of the Movers Conference of America.

Wilbur R. Andreson, controller Bekins Van & Storage Co.—elected treasurer of the Los Angeles Control of the Controllers' Institute of America.

W. W. Shearer died recently of a chronic heart ailment at Kessler Air Force Base where he had gone on business. He was 53 years old. Mr. Shearer, long prominent in the moving industry, formerly was vice president and treasurer of Greyvan Lines, Inc., with which he was associated for 19 years.

Optimistic Business Outlook

A current survey conducted by the National Association of Refrigerated Warehouses among members of the public refrigerated warehouse industry indicates a general optimistic business outlook, with warehousemen reporting plans to add 7,759,200 cu ft of freezer storage space by October, 1954. The report showed that the warehousemen expect to add 3,334,200 cu ft during the next six months, and 4,425,000 cu ft during the following six months. During the same period, approximately 1 million cu ft of cooler space will disappear as a result of conversions to lower (freezer) temperatures.

—DA—

Effective January 1, 1954, social security contributions by employers and employes increase from the present 1½ per cent each to 2 per cent each.

—DA—

New Warehouses

NC & St.L railway will build a $250,000-warehouse at New Shops for lease to Central Van & Storage Co., Nashville, Tenn. It will be 150 by 400 ft in size with a 50-ft loading dock extension and 30 plastic skylights, 3 by 8½ ft, to light the interior.

For Additional Warehouse News, See Chuting the News, Washington DA and Within the Law